TOOLS HARDWARE & SUPPLIES

CATALOGUE No. 565

HAMMACHER SCHLEMMER & CO.
4th AVENUE at 13th STREET
New York since 1848

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HARDWARE & SUPPLIES

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HAMMACHER SCHLEMMER & CO.
4th AVENUE *at 13th* STREET
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FOREWORD

This abridged catalog shows only a very small portion of our extensive stock of HARDWARE, TOOLS and SUPPLIES and has been compiled principally for schools and small users of woodworking tools and supplies.

Among our specialties in other lines of Tools and Hardware, consisting of over 100,000 different articles, are:

TOOLS

Blacksmiths'
Cabinet Makers'
Lathe
Machinists'
Piano
Patternmakers'
Tool Makers'

Band and Circular Saws
Chucks

HARDWARE

Builders'
Cabinet
Garage
Piano
Shelf

Bathroom Trimmings
Box Strapping
Casters
Chain

FACTORY SUPPLIES

Abrasives:
(Paper and Cloth, Belts, Discs, etc.)

Bolts:
(Carriage, Machine, Stove, etc.)

Babbitt Metal
Belt Dressing, Lacing, etc.
Brass and Steel Rod
Felts and Cloths
Genuine F. & G. Steel MUSIC WIRE
Leather Fillet
Nuts
Rivets and Burrs
Screws—Cap, Set, Lag, etc.
Steel Balls
Trucks
Washers

AUTOMOTIVE EQUIPMENT AND SUPPLIES
GLUE ROOM EQUIPMENT
CUTLERY—DOWELS

This enormous stock requires a floor space of more than ninety thousand square feet, which is contained in two large warehouses, besides our main building at No. 133 Fourth Avenue.

For the past seventy-odd years we have made a specialty of QUALITY and any materials you might purchase of us, we guarantee in every respect.

Few people realize how conveniently we are located at Fourth Avenue and 13th Street, as nearly every line of transit brings you within a block of our door.

WE SOLICIT YOUR INQUIRIES AND ORDERS

'Phone Stuyvesant 7000

IMPORTANT NOTICE

THIS CATALOGUE IS NOT INTENDED

to present our full line of Tools and Hardware, but is an abridged edition intended for the use of those who buy in smaller quantities, for moderate or occasional use for pastime.

PRICES: Orders will be executed as promptly as possible and at lowest current rates consistent with the high standard of quality which we maintain.

TERMS: Our terms are f. o. b. New York, net cash thirty days, except where parties are not known to us and have no commercial rating, in which case we require cash with order. If c. o. d. shipment is preferred please mention whether the goods are to go by mail or express and also if they are to be insured. The collection charges in either case will be added to the invoice.

A WORD ABOUT FREIGHTS:

We do not pay the transportation charges, unless added to the prices. We assume our patrons would prefer to pay the *actual* cost rather than have a *high guess* made and the amount *deducted* from the quality of the tools. No matter what the method is, *consumers in all cases pay the freight*, and where you buy at a delivered price you are simply helping to pay the freight of somebody who lives perhaps hundreds of miles further away than you—as it must be *equalized* when paid by the dealer.

Therefore our goods are F. O. B. cars New York and you pay only the actual cost.

BEFORE YOU ORDER study carefully all details enumerated in the catalogue.

Any point omitted necessitates correspondence and loss of time, and frequently delays shipments, to the great annoyance of customers.

We ask our friends NOT TO MUTILATE THIS CATALOGUE by tearing out pages. A reference to page number and number and description of goods will always enable us to trace any item without difficulty.

GUARANTEE: We warrant tools purchased from us to be perfect in material and temper, to be free from flaws, and to do the work for which they are recommended, and we will replace any that may prove defective in either of the above particulars, BUT CANNOT undertake to replace tools that break through misuse or carelessness where the steel is sound.

RETURN GOODS: Merchandise must not be returned for replacement or credit without first asking for our permission.

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Combination Bench and Tool Cabinet

H. S. & CO. PATENTED

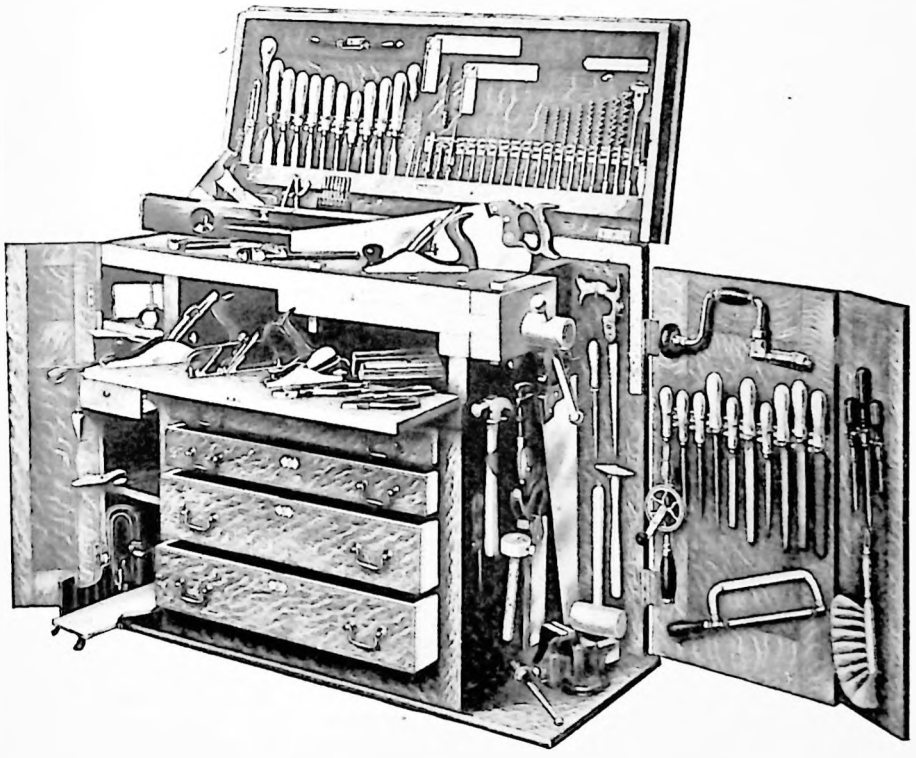


ILLUSTRATION No. 100

This Combination Bench Cabinet is unique in construction. The illustration shows fully its many desirable features, among which are its conveniently arranged drawer and closet space, side opening and hinged top. The bench top is made of seasoned maple, is absolutely rigid and supported by strong uprights which rest directly on the floor. When the cabinet is closed, the bench top as well as all tools are inside, thus making it a fine piece of polished furniture. Trimmed throughout with solid brass locks and handles. The cabinet dimensions are as follows: Length, 47 inches; width, 19 inches; height, 35 inches. The outfits contain about 100 different tools, all of the highest grade, as may be noted from the detailed list on next page.

Outfit No. 100. Polished Oak, has a wooden vise with 1¾-inch screw, and double bench stop, and the bench top is arranged for their adjustment.

Outfit No. 200. Polished Oak, is fitted with a quick action iron vise and double stop in place of the wooden vise. The iron vise has one movable and two stationary jaws, which can be operated at either the head or tail.

Outfit No. 400. Polished Mahogany, is the same as No. 200 in every respect, excepting the cabinet is made of solid mahogany instead of oak, and the hardware and vise are finished in old brass.

See following page for detailed list of Tools and page 3 for weight of Cabinets.

Combination Bench and Tool Cabinet

H. S. & CO. PATENTED

(Illustrated on preceding page)

List of Tools for Outfits Nos. 100, 200 and 400

Buck Bros. Handled and Sharpened Firmer Chisels, 1/8, 1/4, 3/8, 1/2, 5/8, 3/4 and 1 inch.
Buck Bros. Handled and Sharpened Firmer Gouges, 3/8, 1/2, 3/4 inch.
Russell Jennings Auger Bits, Nos. 4, 5, 6, 7, 8, 9, 10 and 12.
Clark Expansive Bit, 7/8 to 3 inches.
Imported Gimlet Bits, Nos. 2, 3, 4, 5, 6, 7 and 8.
H. S. & Co. Extra Quality Crosscut Saw, 22 inches.
H. S. & Co. Extra Quality Rip Saw, 22 inches.
H. S. & Co. Back Saw, 10 inches.
H. S. & Co. Compass Saw, 10 inches.
Disston Iron Pad Keyhole Saw, No. 10.
Hammond Adze-Eye Nail Hammer, No. 2.
H. S. & Co. Riveting Hammer, No. 1.
Round Lignum-vitæ Mallet, No. 4.
Stanley Iron Jack Plane, No. 5.
Stanley Iron Smooth Plane, No. 4.
Stanley Iron Rabbet and Filletster Plane, No. 78.
Stanley Iron Block Plane, No. 18.
Barber Nickel-plated Ball-bearing Ratchet Brace, No. 33, 8 inches.
M. F. Co. Hand Drill, No. 1.
Disston Sliding T-Bevel, 8 inches, No. 3.
Disston Hardened Blade Try Squares, No. 5½, 6 and 8 inches.
Sargent Steel Nickel-plated Square, No. 30N, 18 x 12 inches.
Stanley Two-Foot Boxwood Folding Rule, Brass Bound, No. 54.
Stanley Marking Gauge, No. 64½.
H. S. & Co. New Century Screwdriver, No. 100, 2½, 4 and 6 inches.
H. S. & Co. Winged Divider, No. 35, 6 inches.
H. S. & Co. Sloyd Knife, No. 6.
M. F. Co. Spokeshave, No. 2.
H. S. & Co. Cabinet Scraper, 3x6 inches.
H. S. & Co. Handled Brad Awl, 1⅜ inches.
Perfection Sandpaper Holder.
H. S. & Co. Flat Nose Pliers, No. 1906½, 5½ inches.
H. S. & Co. Round Nose Pliers, No. 1906¾, 5½ inches.
Combination Pliers, No. 1880, 7 inches.
Trimo Pipe Wrench, 10 inches.
Standard Vise, No. 78.
Reliance Tinners' Snips, No. 10.
H. S. & Co. Carpenters' Pincers, 6 inches.
Perfect Handle Monkey Wrench, 8 inches.
Set of Bit Stock Drills, 1/8, 5/32, 3/16, 7/32, 1/4, 5/16 and 3/8 inch (for metal).
K. & F. Handled Double Ender Saw File, 8 inches.
K. & F. Handled Warding Bastard File, 4 inches.
K. & F. Handled Flat Bastard File, 6 and 8 inches.
K. & F. Handled Half Round Bastard File, 6 and 8 inches.
K. & F. Handled Round Bastard File, 6 and 8 inches.
K. & F. Handled Square Bastard File, 6 inches.
K. & F. Handled Cabinet File, 8 inches.
K. & F. Handled Cabinet Rasp, 8 inches.
Stanley Adjustable Level, No. 3, 22 inches.
Jacob Mitre Box, No. 4.
Brass Plumb Bob, No. 5, with one hank No. 6 Linen Line.
Starrett Nickel-plated Hack Saw Frame, No. 140, with six 8-inch blades.
Glass Cutter, No. 2.
Bench Duster, No. 10.
H. S. & Co. Screwdriver Bit, No. 10, 3/8-inch
India Oil Stone, mounted in iron box, No. 29, Combination.
H. S. & Co. Rose Countersink, No. 10, 5/8-inch.
H. S. & Co. Knurled Nail Set, No. 2.
H. S. & Co. Square Reamer, No. 40.
Coppered Steel Oiler, No. 12.
Buck Bros. Scratch Awl.
H. S. & Co. Knurled Center Punch, No. 10, 5/16-inch.
Hammond Half Hatchet, No. 30, Size No. 1

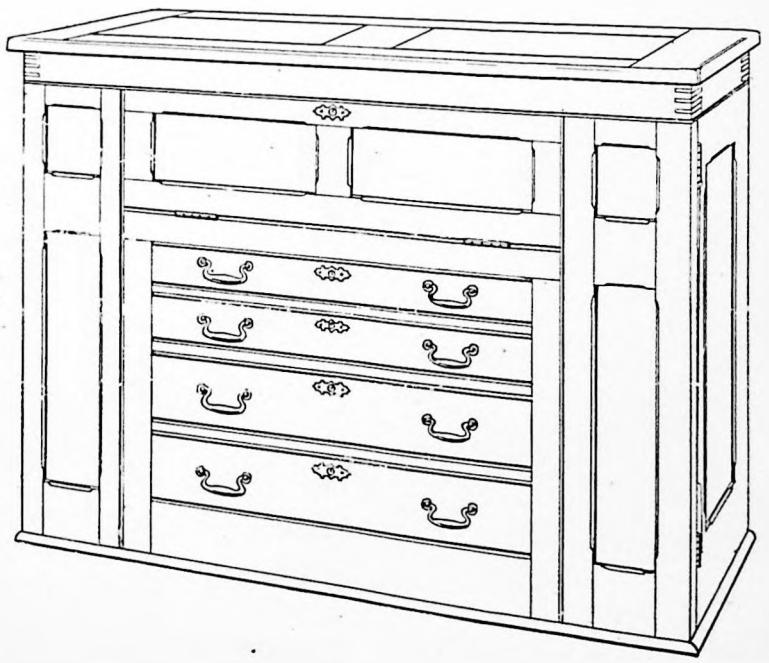
No. 100 Complete with tools.....
No. 200 Complete with tools.....
No. 400 Complete with tools..... } Prices on Application

Above prices are subject to change without notice

Combination Bench and Tool Cabinet

H. S. & CO. PATENTED

Cabinets Only—Without Tools



		With Racks Each	Without Racks Each
No. 0100	Cabinet only, without tools, Polished Oak	Prices on Application	
No. 0200	Cabinet only, without tools, Polished Oak		
No. 0400	Cabinet only, without tools, Polished Mahogany		

Weight of Cabinets

	Without Tools Boxed for Shipment	With Racks Not Boxed
No. 0100	280 lbs.	210 lbs.
No. 0200	305 lbs.	235 lbs.
No. 0400	285 lbs.	215 lbs.

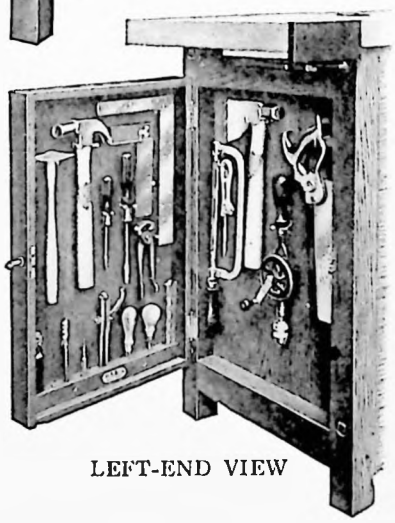
	Complete with Tools Boxed for Shipment	Not Boxed
No. 100	375 lbs.	290 lbs.
No. 200	400 lbs.	315 lbs.
No. 400	380 lbs.	295 lbs.

The boxed weights will vary to some extent owing to difference in weight of lumber.

H. S. & Co. Tool Outfit No. 75

ILLUSTRATION No. 75

This Outfit is contained in a Combination Bench Cabinet, 33½ inches high, with a bench top 50 inches long, 22 inches wide, 2¼ inches thick, having a tool recess at back 7 inches wide. The top is made of strips of thoroughly seasoned hard maple, having heavy bolsters at each end; tongued and grooved joints, bolted and glued together. Has rapid-acting vise and adjustable metal planing stop. The cabinet is made almost entirely of oak, with solid brass hardware. The top and middle drawers are 18¾ x 16 x 6 inches; the bottom drawer measures 29½ x 16 x 6½ inches and is fitted with tool racks. The cupboard is 9½ inches wide, 16½ inches deep, 14 inches high. The end tool racks have inside space, available for tools, 14¼ inches wide, 22 inches high and 3 inches deep.
The tools in this outfit are the best obtainable and a complete list is found on page 6.



LEFT-END VIEW

		Each
No. 75	Complete with tools	$120.00
No. 075	Cabinet only, without tools	80.00

Approximate weights, No. 075, Cabinet only, boxed, 275 pounds; not boxed, 200 pounds
Approximate weights, No. 75, complete, boxed, 330 pounds; not boxed, 255 pounds.
The boxed weights may vary to some extent owing to difference in weight of lumber.

H. S. & Co. Tool Outfit No. 55

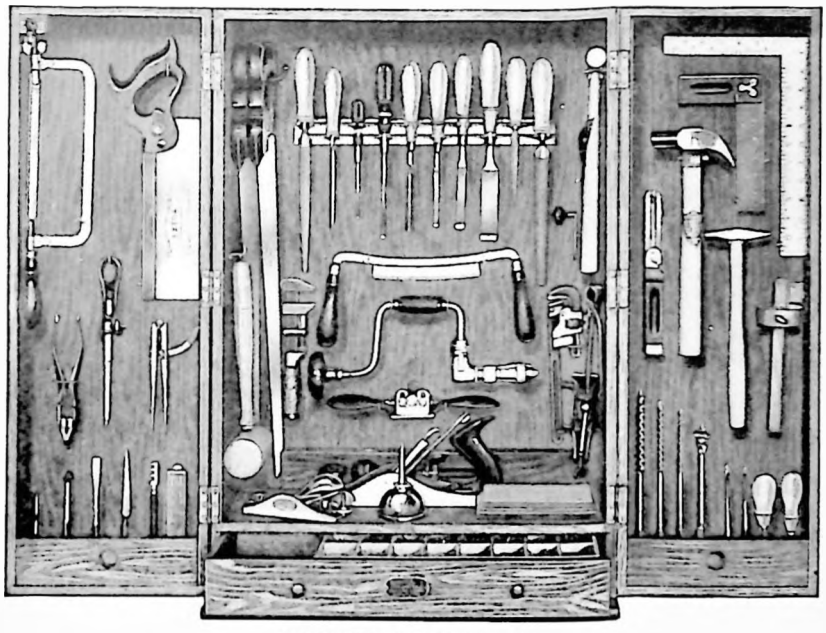


ILLUSTRATION No. 55

The cabinet for this outfit is made of solid oak, with locked corners; is trimmed in brass, well finished, and high grade in every detail. The outside dimensions are 33 inches in height, 22 inches wide, and 10 inches deep, and the door is divided to open in the center. When open, the width across entire front is 44½ inches. There is room in the drawer for the utility box No. 10, a small tray divided into compartments for holding an assortment of nails, tacks, staples and screws, and this box, filled, is included with each outfit. The illustration shows the 52 different tools and their compact arrangement.

The tools in this outfit are the best obtainable and a complete list is found on page 6.

		Each
No. 55	Complete with tools	$71.50
No. 055	Cabinet only, without tools	23.75

Approximate weights, No. 055, Cabinet only, boxed, 70 pounds; not boxed, 50 pounds.
Approximate weights, No. 55, complete, boxed, 125 pounds; not boxed, 95 pounds.
The boxed weights may vary to some extent owing to difference in weight of lumber.

H. S. & Co. Tool Outfits

List of Tools Contained in Outfits Nos. 75 and 55, illustrated on pages 4 and 5

H. S. & Co. Crosscut Saw, 22 inches.

H. S. & Co. Rip Saw, 22 inches.

H. S. & Co. Back Saw, 10 inches.

Disston Iron Pad Keyhole Saw, No. 10.

H. S. & Co. Hack Saw Frame, No. 100, with half dozen H. S. & Co. 8-inch blades.

Hammond A. E. Nail Hammer, No. 2.

H. S. & Co. Riveting Hammer, No. 0.

Hammond Half Hatchet, No. 30, size No. 1.

Round Second Growth Hickory Mallet, No. 4.

H. S. & Co. Nail Set, No. 10.

Pair H. S. & Co. Carpenters' Pincers, 6 inches.

H. S. & Co. New Century Screwdriver, No. 120, 3½ inches, slim.

H. S. & Co. New Century Screwdriver, No. 100, 5 inches.

B. M. Co. Screwdriver Bit, No. 10, ⅜-inch.

Stanley Iron Jack Plane, No. 5.

Stanley Iron Block Plane, No. 18.

Iron Spokeshave, No. 91, adjustable.

Witherby Carpenters' Draw Knife, No. 115, 6 inches.

Buck Bros. Handled and Sharpened Chisel, No. 2, ¼-inch.

Buck Bros. ditto, No. 2, ½ inch.

Buck Bros. ditto, No. 2, 1-inch.

Buck Bros. Gouge, No. 8, ⅜-inch.

H. S. & Co. Handled Scratch Awl, 2 inches.

H. S. & Co. Handled Brad Awl, 1½ inches.

M. F. Co. Hand Drill, No. 1.

Barber Nickel-plated Ball-bearing Ratchet Brace, No. 33, 8 inches.

H. S. & Co. Gimlet Bit, ⅛-inch.

H. S. & Co. Gimlet Bit, $\frac{3}{16}$-inch.

Genuine Russell Jennings Auger Bit, ¼-inch.

Genuine Russell Jennings Auger Bit, ⅜-inch.

Genuine Russell Jennings Auger Bit, ½-inch.

Clark Small Expansive Bit, ½-inch to 1½ inches.

H. S. & Co. Square Reamer, No. 40.

H. S. & Co. Rose Countersink, No. 10, ⅝-inch.

Sargent Nickel-plated Steel Carpenter Square, No. 10, 8 inches.

Disston Try Square, No. 1, 6 inches.

Disston Tee Bevel, No. 2, 8 inches.

Stanley Level, No. 104, 18 inches.

Stanley Marking Gauge, No. 64½.

H. S. & Co. Winged Dividers, No. 35, 6 inches.

Stanley Boxwood Rule, No. 53, 2 feet.

Perfect Handle Monkey Wrench, 8 inches.

Genuine Trimo Pipe Wrench, 10 inches.

H. S. & Co. Combination Pliers, No. 1880, 7 inches.

K. & F. Half Round Bastard File, 8 inches, handled.

K. & F. Warding Bastard File, 4 inches, handled.

K. & F. Slim Taper Saw File, 5½ inches, handled.

K. & F. Cabinet Rasp, 8 inches, handled.

Standard Steel Jaw Bench Vise, No. 6.

Carborundum Oil Stone, No. 122, mounted in Oak Case.

Coppered Steel Oiler, No. 12.

Glass Cutter, No. 2.

Utility Box, No. 10, of Brads, Nails, Tacks and Screws.

H. S. & Co. Tool Outfit No. 54

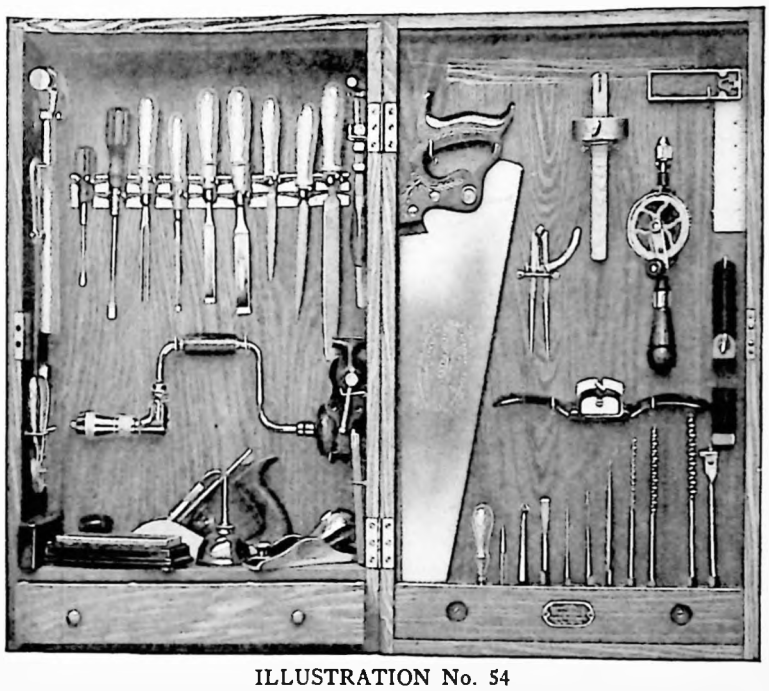


ILLUSTRATION No. 54

These Cabinets are substantially made of polished quartered oak. Outside dimensions are 29½ inches in height, 18 inches in width, and 8½ inches in depth. Owing to size and weight, they are not suitable for a portable outfit, but No. 54 is a most complete and high-grade set of tools in every detail. Contains 40 different tools of the very best quality, among them being a Barber Ball-bearing Brace, Stanley Iron Planes, etc. The detailed list on the next page shows the very high quality of each item.

		Each
No. 54	Complete with tools	$53.00
No. 054	Cabinet only, without tools	21.75

Approximate weights: No. 054, Cabinet only, boxed, 45 pounds; not boxed, 30 pounds.
Approximate weights: No. 54, complete, boxed, 72 pounds; not boxed, 57 pounds.

H. S. & Co. Tool Outfit No. 54

See Preceding Page for Illustration

H. S. & Co. Extra Quality Crosscut Saw, 20 inches.
H. S. & Co. New Century Screwdriver, No. 100, 4 inches.
H. S. & Co. New Century Screwdriver, No. 100, 6 inches.
Barber Nickel-plated Ball-bearing Ratchet Brace, No. 33, 8 inches.
Stanley Iron Block Plane, No. 18.
Stanley Iron Jack Plane, No. 5.
Coppered Steel Oiler, No. 12.
India Oil Stone, No. 2, mounted in iron box.
Hammond Adze-eye Nail Hammer, No. 2.
Disston Hardened Blade Try-square, No. 5½, 6 inches.
Stanley Iron Spokeshave, No. 53.
Buck Bros. Handled and Sharpened Chisel, No. 2, ¼-inch.
Buck Bros. Handled and Sharpened Chisel, No. 2, ½-inch.
Buck Bros. Handled and Sharpened Chisel, No. 2, ¾-inch.
Buck Bros. Handled and Sharpened Gouge, No. 8, ⅜-inch.
H. S. & Co. Best Quality Riveting Hammer, No. 0.
M. F. Co. Hand Drill, No. 1.
Russell Jennings Auger Bit, No. 4.
Russell Jennings Auger Bit, No. 6.
Russell Jennings Auger Bit, No. 8.
Clark Expansive Bit, ½ to 1½ inches.
H. S. & Co. Gimlet Bit, ⅛-inch.
H. S. & Co. Gimlet Bit, $\frac{3}{16}$-inch.
H. S. & Co. Handled Brad Awl, 1⅜ inches.
H. S. & Co. Rose Countersink, No. 10, ½-inch.
H. S. & Co. Knurled Nail Set.
Stanley Beech Marking Gauge, No. 64½.
Stanley Sliding T-Bevel, No. 2, 8 inches.
Perfect Handle Monkey Wrench, 6 inches.
Stanley Boxwood Folding Rule, No. 61, 2-foot.
H. S. & Co. Winged Dividers, No. 35, 6 inches.
Bernard Nickel-plated Side Cutting Pliers, No. 102, 5½ inches.
H. S. & Co. Burner Pliers, No. 118, 6 inches.
Disston Iron Pad Keyhole Saw, No. 2.
K. & F. Handled Flat Bastard File, 8 inches.
K. & F. Handled Half-round Bastard File, 6 inches.
K. & F. Handled Warding Bastard File, 4 inches.
Jersey Vise, No. 741.
H. S. & Co. Square Reamer, No. 40.
H. S. & Co. Screwdriver Bit, No. 10, ⅜-inch.

H. S. & Co. Tool Outfit No. 53

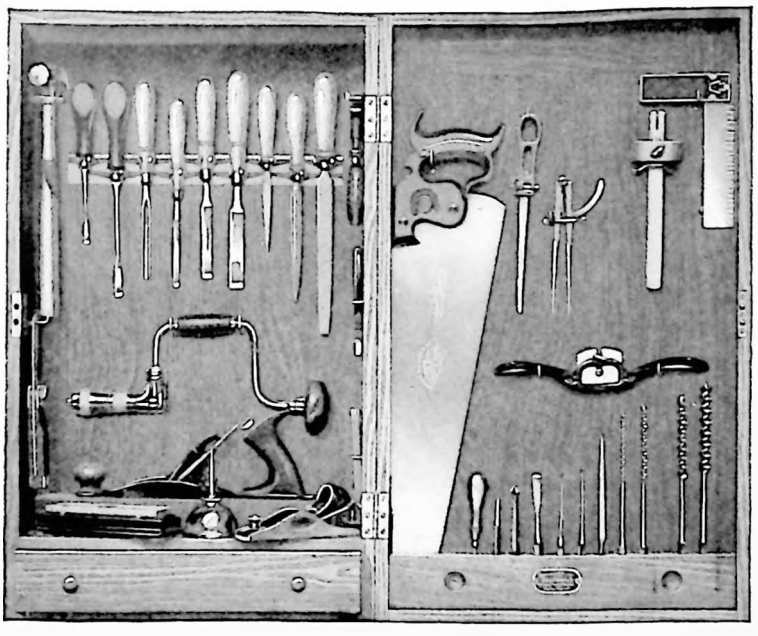


ILLUSTRATION No. 53

This outfit has the same polished quartered oak cabinet as in Outfit No. 54, shown on page 7, but contains fewer tools. The 36 tools are all of the best and a full list is found on page 10.

		Each
No. 53	Complete with tools	$43.00
No. 053	Cabinet only, without tools	21.75

Approximate weights: No. 053, Cabinet only, boxed, 45 pounds; not boxed, 30 pounds.
Approximate weights: No. 53, Complete, boxed, 67 pounds; not boxed, 52 pounds.

H. S. & Co. Tool Outfit No. 53

See Preceding Page for Illustration

Barber Nickel-plated Ratchet Brace, No. 323, 8 inches.
Buck Bros. Handled and Sharpened Chisel, No. 2, ¼-inch.
Buck Bros. Handled and Sharpened Chisel, No. 2, ½-inch.
Buck Bros. Handled and Sharpened Chisel, No. 2, ¾-inch.
H. S. & Co. New Century Screwdriver, No. 100, 4 inches.
H. S. & Co. New Century Screwdriver, No. 100, 6 inches.
Disston Hardened Blade Try-square, No. 5½, 6 inches.
Stanley Wood Jack Plane, No. 26.
Stanley Iron Block Plane, No. 9½.
Hammond Adze-eye Nail Hammer, No. 2.
Stanley Boxwood Folding Rule, No. 61, 2-foot.
K. & F. Handled Flat Bastard File, 8 inches.
K. & F. Handled Half-round Bastard File, 6 inches.
K. & F. Handled Warding Bastard File, 4 inches.
Buck Bros. Handled and Sharpened Gouge, No. 8, ⅜-inch.
Disston Crosscut Saw, No. 7, 18 inches.
Disston Iron Pad Keyhole Saw, No. 2.
Stanley Iron Spokeshave, No. 53.
Stanley Beech Marking Gauge, No. 64½.
Russell Jennings Auger Bit, No. 4.
Russell Jennings Auger Bit, No. 6.
Russell Jennings Auger Bit, No. 8.
Russell Jennings Auger Bit, No. 10.
Imported Gimlet Bit, ⅛-inch.
Imported Gimlet Bit, $\frac{3}{16}$-inch.
H. S. & Co. Handled Brad Awl, 1⅜ inches.
H. S. & Co. Rose Countersink, No. 10, ½-inch.
H. S. & Co. Screwdriver Bit, No. 10, ⅜-inch.
H. S. & Co. Knurled Nail Set.
H. S. & Co. Winged Dividers, No. 35, 6 inches.
India Oil Stone, No. 2, mounted in iron box.
Coppered Steel Oiler, No. 12.
H. S. & Co. Combination Pliers, No. 25, 5½ inches.
Perfect Handle Monkey Wrench, 6 inches.
Disston Sliding T-Bevel, No. 2, 8 inches.
H. S. & Co. Square Reamer, No. 40.

H. S. & Co. Tool Outfit No. 52

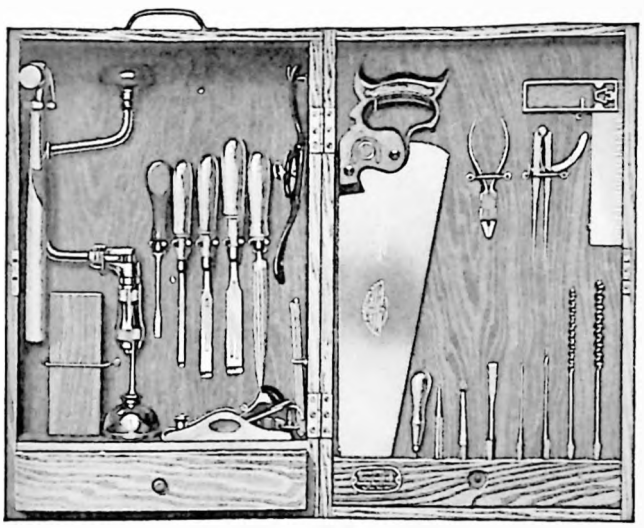


ILLUSTRATION No. 52

These Cabinets are made of polished quartered oak, substantially built, but light enough in construction to permit the outfit to be easily portable, and are provided with convenient handle for carrying. When closed, the cabinets form an attractive piece of furniture. Outside dimensions are 22 inches in height, 14 inches in width and 6 inches in depth. Each outfit contains 24 high-grade tools, carefully selected to give as complete an assortment as possible where a small portable outfit is required. They are excellent for general home use.

Disston Crosscut Saw, No. 7, 16 inches.
Buck Bros. Handled and Sharpened Chisel, No. 2, ¼-inch.
Buck Bros. Handled and Sharpened Chisel, No. 2, ½-inch.
Buck Bros. Handled and Sharpened Chisel, No. 2, ¾-inch.
Hammond Adze-eye Nail Hammer, No. 2.
H. S. & Co. New Century Screwdriver, No. 100, 4 inches.
H. S. & Co. Gimlet Bit, ⅛-inch.
H. S. & Co. Gimlet Bit, 5/16-inch.
Russell Jennings Auger Bit, No. 6.
Russell Jennings Auger Bit, No. 8.
Barber Nickel-plated Ratchet Brace, No. 323, 8 inches.
H. S. & Co. Combination Pliers, No. 25, 5½ inches.
H. S. & Co. Handled Brad Awl, 1⅜ inches.
H. S. & Co. Rose Countersink, No. 10, ½-inch.
H. S. & Co. Knurled Nail Set.
Stanley Boxwood Folding Rule, No. 61, 2-foot.
Disston Hardened Blade Try-square, No. 5½, 6 inches.
Stanley Iron Block Plane, No. 9½.
H. S. & Co. Screwdriver Bit, No. 10, ⅜-inch
Best Quality Rosy Red Oil Stone, 6 inches, mounted.
H. S. & Co. Winged Dividers, 6 inches.
Stanley Iron Spokeshave, No. 53.
K. & F. Handled Half-round Bastard File, 6 inches.
Coppered Steel Oiler, No. 12.

		Each
No. 52	Complete with tools	$28.50
No. 052	Cabinet only, without tools	13.75

Approximate weights: No. 52, complete, boxed, 35 pounds; not boxed, 32 pounds.
Approximate weights: No. 052, Cabinet only, boxed, 20 pounds; not boxed, 17 pounds.

H. S. & Co. Tool Outfit No. 47

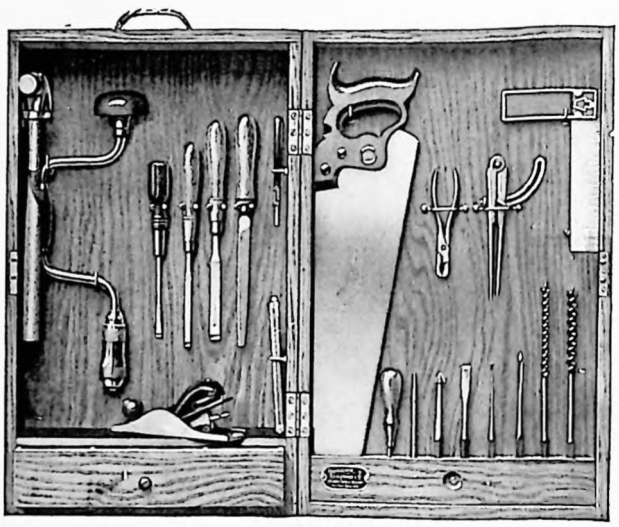


ILLUSTRATION No. 47

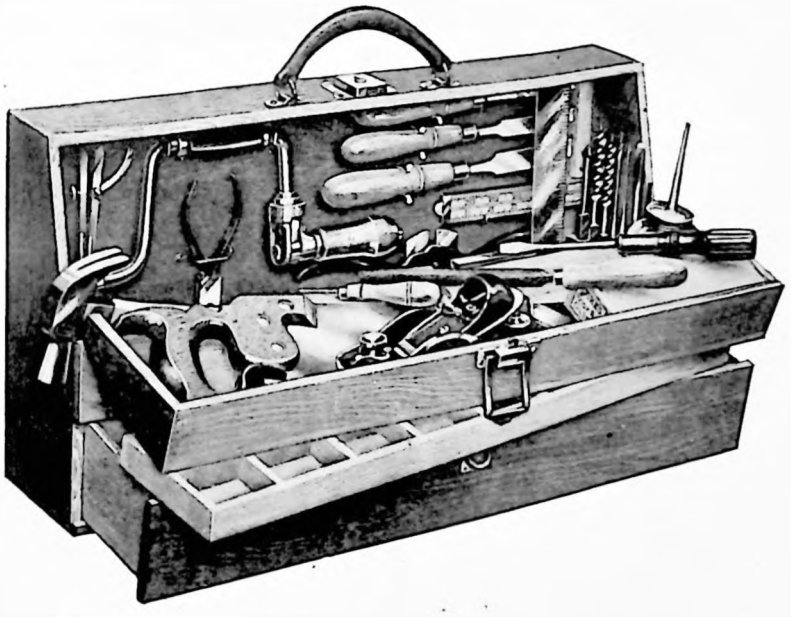
These are the same polished quartered oak, portable Cabinets as contained in the No. 52 Outfit, shown on page 11. This outfit, however, contains only 21 different tools. The assortment naturally is small, but excellent for the boy who wants to make a beginning in woodworking.

Crosscut Saw, 16 inches.
Hammond Adze-eye Nail Hammer, No. 2.
Stanley Adjustable Iron Block Plane, No. 120.
Barber Nickel-plated Brace, No. 223, 8 inches.
Blued Auger Bit, 3/8-inch.
Blued Auger Bit, 1/2-inch.
H. S. & Co. Gimlet Bit, 1/8-inch.
H. S. & Co. Gimlet Bit, 3/16-inch.
Screwdriver Bit, No. 10 1/2, 3/8-inch.
Buck Bros. Handled and Sharpened Chisel, No. 2, 1/4-inch.
Buck Bros. Handled and Sharpened Chisel, No. 2, 1/2-inch.
New Century Screwdriver, No. 100, 4 inches.
Disston Hardened Blade Try-square, No. 5 1/2, 6 inches.
O. K. Nail Set.
Stanley Boxwood Folding Rule, No. 61, 2-foot.
H. S. & Co. Winged Dividers, 6 inches.
Burner Pliers, No. 118, 5 inches.
H. S. & Co. Flat-nose Pliers, No. 20, 5 inches.
K. & F. Handled Half-round Bastard File, 6 inches.
Rose Countersink, No. 10 1/2, 1/2-inch.
H. S. & Co. Handled Brad Awl, 1 1/8 inches.

		Each
No. 47	Complete with tools	$24.75
No. 047	Cabinet only, without tools	13.75

Approximate weights: No. 47, complete, boxed, 30 pounds; not boxed, 27 pounds.
Approximate weights: Cabinet only, boxed, 20 pounds; not boxed, 17 pounds.

H. S. & Co. Tool Outfit No. 152



We have had repeated calls for a portable outfit which could be carried around more easily than our wall cabinets; in fact, brought directly to the work. This demand is filled by our new No. 152 outfit. The case is of polished oak, 22⅛ inches long, 5¾ inches wide, and 12 inches high, and is fitted with leather handle and brass finished hardware.

The tools are exactly the same, both in assortment and quality, as in Outfit No. 52, shown on page 11.

		Each
No. 152	Outfit complete with tools	$29.50
No. 0152	Outfit cabinet only, without tools	15.00

Weights

		Pounds
No. 152	Complete with tools	23¼
No. 0152	Cabinet only	12¼

H. S. & Co. Manual Training Outfits

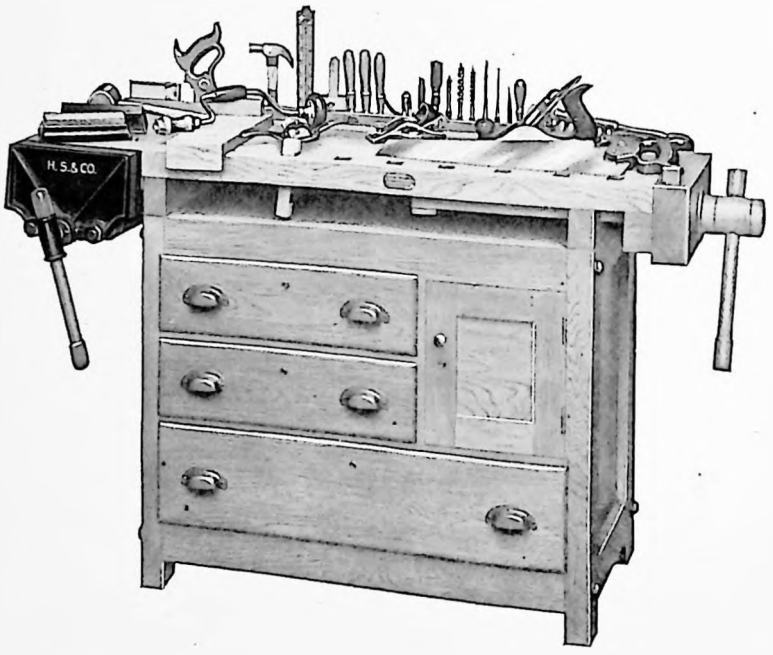


ILLUSTRATION IS OF OUTFIT No. 25A

We wish to impress upon all who are interested in Manual Training Work that the tools in these various outfits are all of the highest grade, fully guaranteed. The benches are made of carefully selected and thoroughly seasoned maple, very rigid and strong, and we take pleasure in recommending them.

Our hobby since 1848 has been to handle only the best, and our extended experience has proven time and again that only the best tools obtainable should be used for Manual Training. In the hands of beginners, tools are usually put to severe and undue strain, and unless quality is there they are bound to give way.

The various outfits as listed are not intended to cover all requirements, but were carefully planned to form a nucleus or start which may be enlarged as necessity demands.

While they were planned after years of experience, we realize that many manual training directors have their own personal ideas on the subject, and we are always ready to quote on special requirements and alter any of our outfits to conform with general conditions, appropriations, etc.

We might state, also, that while these outfits are designed primarily for manual training use, they make excellent outfits for home use.

H. S. & Co. Manual Training Outfits

We are often asked to suggest a moderate-priced Bench Outfit, and where conditions are normal and the appropriation is limited, we invariably advise our No. 24. This outfit contains all the necessary tools for a general equipment for all-around work.

For those preferring a bench with cupboard and rapid-acting vises, we advise No. 25A, as illustrated on preceding page.

Outfits Nos. 24, 24A, 25 and 25A contain the following 27 tools:

One Buck Bros. Handled and Sharpened Firmer Chisel, ¼-inch.
One Buck Bros. Handled and Sharpened Firmer Chisel, ½-inch.
One Buck Bros. Handled and Sharpened Firmer Gouge, ⅜-inch.
One Disston Back Saw, No. 4, 10 inches.
One Disston Hand Saw, No. 7, 22 inches.
One Hammond Adze-eye Nail Hammer, No. 3.
One Stanley Iron Block Plane, No. 9½.
One Stanley Iron Smooth Plane, No. 3.
One Imported Gimlet Bit, 5/16-inch.
One Imported Gimlet Bit, ¼-inch.
One Russell Jennings Genuine Dowel Bit, ⅜-inch.
One Russell Jennings Genuine Dowel Bit, ½-inch
One Barber Nickel-plated Brace, No. 223, 8 inches.
One Rose Countersink, No. 10, ⅝-inch.
One Disston Hardened Blade Try-square, No. 5½, 6 inches.
One Stanley Beech Marking Gauge, No. 64½.
One New Century Screwdriver, 4 inches.
One Stanley Boxwood Rule, No. 18, 2-foot, 2 fold.
One Round Hickory Mallet, No. 4.
One H. S. & Co. Handled Brad Awl, 1¼-inch.
One P. S. & W. Winged Dividers, No. 35, 6 inches.
One Bench Duster, No. 10.
One H. S. & Co. Knurled Nail Set.
One H. S. & Co. Sloyd Knife, No. 7.
One Stanley Iron Spokeshave, No. 53.
One India Oil Stone, No. 29, in iron box.
One H. S. & Co. Maple Bench Hook.

		Each
No. 24	Includes above list of tools with Manual Training School Bench Style J (see page 19)	$39.60
No. 24A	Includes above list of tools with Manual Training School Bench Style R (see page 19)	49.00
No. 25	Includes above list of tools with Manual Training School Bench Style P (see page 20)	45.30
No. 25A	Includes above list of tools with Manual Training School Bench Style S (see page 20)	60.00

H. S. & Co. Manual Training Outfits

Class Equipment for Ten Pupils

On this page we list a high-grade equipment for a class of ten pupils. It can be modified, however, for a greater or less number of pupils, and we will submit price upon receipt of specifications. The outfit as made up has given satisfaction wherever it has been adopted.

Individual Tools

10 Buck Bros. Handled and Sharpened Firmer Chisels, ¼-inch.
10 Buck Bros. Handled and Sharpened Firmer Chisels, ½-inch.
10 Buck Bros. Handled and Sharpened Firmer Gouges, ⅜-inch.
10 Disston Back Saws, No. 4, 10 inches.
10 Hammond Adze-eye Nail Hammers, No. 3.
10 Stanley Iron Block Planes, No. 9½.
10 Stanley Iron Smooth Planes, No. 3.
10 Stanley Iron Spokeshaves, No. 53.
10 H. S. & Co. Gimlet Bits, ⅛-inch.
10 H. S. & Co. Gimlet Bits, ¼-inch.
10 Russell Jennings Genuine Dowel Bits, ⅜-inch.
10 Russell Jennings Genuine Dowel Bits, ½-inch.
10 Barber Nickel-plated Braces, No. 223, 8 inches.
10 Disston Hardened Blade Try-squares, No. 5½, 6 inches.
10 Stanley Beech Marking Gauges, No. 64½.
10 New Century Screwdrivers, 4 inches.
10 Stanley Boxwood Rules, No. 18, 2-foot, 2 fold.
10 Round Hickory Mallets, No. 4.
10 H. S. & Co. Maple Bench Hooks.
10 H. S. & Co. Handled Brad Awls, 1¼-inch.
10 H. S. & Co. Winged Dividers, No. 35, 6 inches.
10 Bench Dusters, No. 10.
10 H. S. & Co. Knurled Nail Sets.
10 H. S. & Co. Sloyd Knives, No. 7.

Class Tools

1 Buck Bros. Handled and Sharpened Firmer Chisel, ¾-inch.
1 Buck Bros. Handled and Sharpened Firmer Chisel, 1-inch.
1 Buck Bros. Handled and Sharpened Firmer Gouge, ¾-inch.
1 Disston Crosscut Saw, No. 7, 22 inches.
1 Disston Rip Saw, No. 7, 22 inches.
1 M. F. Co. Turning Saw, 14 inches, with blade.
1 Stanley Wood Jack Plane, No. 26.
1 Stanley Iron Rabbet and Filletster Plane, No. 78.
1 Russell Jennings Genuine Dowel Bit, ⅝-inch.
1 Russell Jennings Genuine Dowel Bit, ¾-inch.
1 Handled K. & F. Flat Bastard File, 8 inches.
1 Handled K. & F. Half-round Bastard File, 8 inches.
1 Handled K. & F. Round Bastard File, 8 inches.
1 Handled K. & F. Square Bastard File, 8 inches.
2 Rose Countersinks, No. 10, ⅝-inch.
2 Medium India Oil Stones, No. 29, mounted in iron box.
1 Disston Sliding T-Bevel, No. 2, 8 inches.
12 Jorgensen Hand Screws, 10 inches.

No. 20	Includes above list of tools with 10 Manual Training School Benches, Style J (see page 19)	Prices on Application
No. 20A	Includes above list of tools with 10 Manual Training School Benches, Style R (see page 19)	
No. 21	Includes above list of tools with 10 Manual Training School Benches, Style P (see page 20)	
No. 21A	Includes above list of tools with 10 Manual Training School Benches, Style S (see page 20)	

H. S. & Co. Work Benches

We call attention to the superior quality of our Benches. They are not the ordinary kind made to sell in competition with the cheapest, but are made of thoroughly seasoned, kiln-dried stock, carefully and scientifically put together. The lumber is cut and prepared a long time before use, giving sufficient time to dry and cure, and will not warp or crack after a short period, as the inferior and cheaper-priced benches so often do. We take pleasure in recommending them to the most particular.

The benches on pages 19 to 21 have tops made of narrow pieces of lumber double-dovetailed together so firmly and securely that it is practically impossible to separate them. The dovetail runs the entire length of the piece, obviating any chance of warping or shrinking.

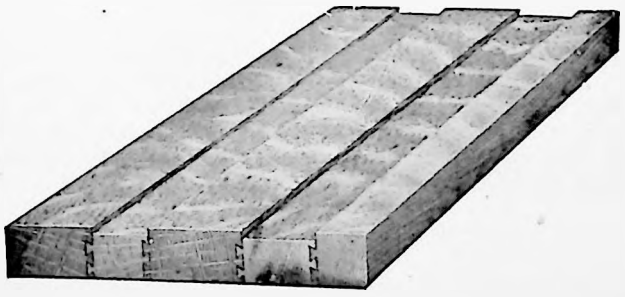
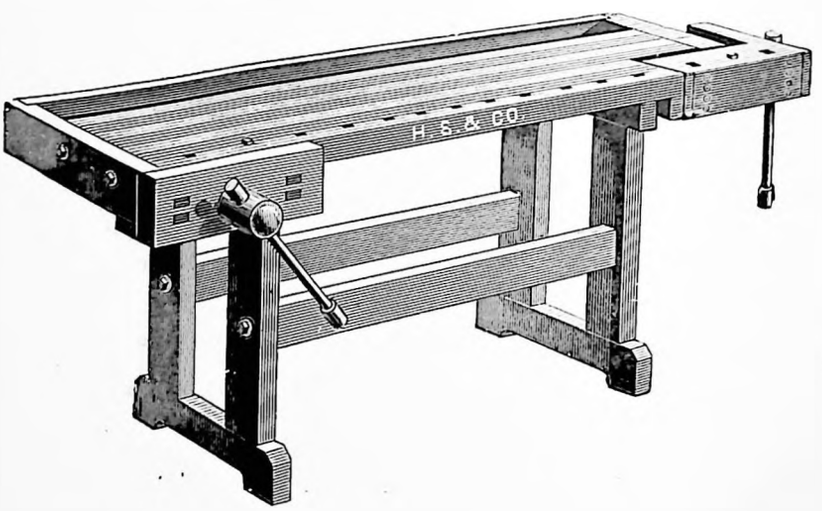


ILLUSTRATION SHOWING THE DOUBLE-DOVETAIL FEATURE ON BENCHES SHOWN ON PAGES 19 TO 21

H. S. & Co. Cabinet Makers' Benches



Style B

Made of Maple throughout, except the vise screws, which are second-growth hickory. The top, exclusive of vises, is 75 inches long, 24 inches wide, 2¾ inches thick, with 7 inches recess. Stands 33 inches high. Has two iron stops. Head vise is 18 inches wide, opens 12 inches. Tail vise is 6 inches wide, opens 10 inches. Vise screws, 2⅜ x 17 inches. Oil rubbed. Weight, 190 pounds. No better bench can be had for the money.

Each $31.75

Style C

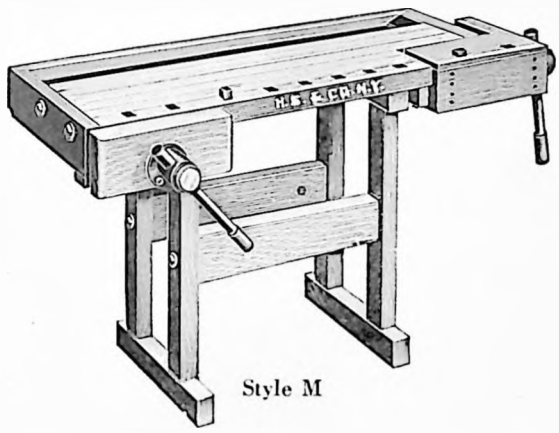
Same as Style B, except that the length of the top is 64 inches. Weight, 167 pounds.

Each $30.90

Above prices are subject to change without notice

H. S. & Co. Manual Training and Home Benches

Have double-dovetailed feature described on page 17



Style M

The Style M Bench is built on practically the same lines as our Style B Cabinet Maker's Bench, but smaller. Made of maple with hickory vise screws. Top, exclusive of vises, is 51 inches long, 20 inches wide, 2⅛ inches thick, with 6 inches recess. Stands 33 inches high. Has two wooden stops. Vise screws 2 x 17 inches. Head vise 14 inches wide, opens 12 inches. Tail vise 6 inches wide, opens 6½ inches. Weight, 115 pounds. Each, $23.25

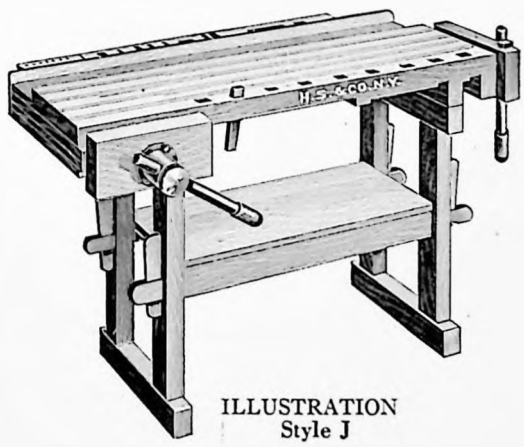


ILLUSTRATION
Style J

This is our Standard School Bench, and since it has been on the market has met with extremely favorable reception. Our vise construction is the result of careful experiment, and as now made distributes the strain over the entire bench top. Bench is made of thoroughly seasoned lumber, carefully put together, all joints being glued where practicable.

Style J

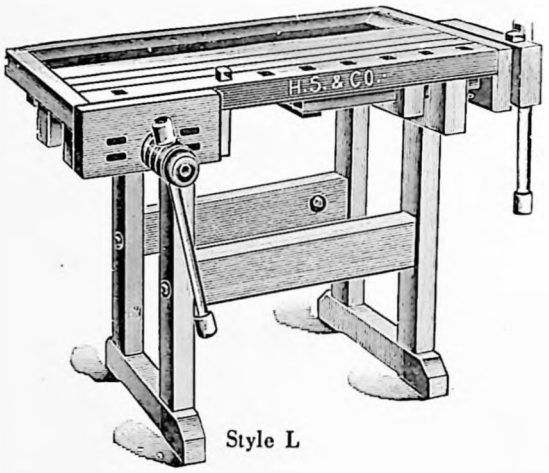
Made of maple, except vise screws, which are second growth hickory. The top, exclusive of vises, is 48 inches long, 18 inches wide, 2 inches thick, with 6 inches recess. Stands 32 inches high. Has two wooden stops. Head vise 12 inches wide, opens 8½ inches. Tail vise 12 inches wide, opens 10 inches. Vise screws 2 x 17 inches. Weight, 105 pounds. Each, $18.45

Style R

Same as Style J, except head vise is a No. 230, size 2, maple-faced rapid-acting vise. Weight, 130 pounds..... Each, $27.85

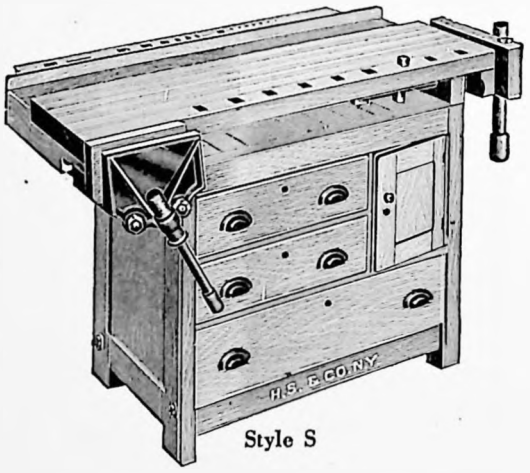
H. S. & Co. Manual Training and Home Benches

Have double-dovetailed feature described on page 17



Style L

This Bench, while it is designed to meet the demand for a low-priced article and is of light construction, is still well made and serviceable. Made of maple, except vise screws, which are hickory. Top, exclusive of vises, is 42 inches long, 20 inches wide, 2 inches thick, with 6 inches recess. Stands 32 inches high. Has two wooden stops. Head vise 12 inches wide, opens 10 inches. Tail vise 12 inches wide, opens 8 inches. Vise screws 2 x 17 inches. Weight, 90 pounds..... Each, $12.60



Style S

This Bench is the Style R Bench shown on page 19, with drawers and cupboard added.
Top drawer, 18 inches wide, 15½ inches deep, 4½ inches high.
Middle drawer, 18 inches wide, 15½ inches deep, 4½ inches high.
Bottom drawer, 29 inches wide, 15½ inches deep, 6¼ inches high.
Cupboard, 10 inches wide, 16 inches deep, 11¼ inches high.
Weight, 185 pounds..... Each, $38.85

Style P

Same as Style S, except that head vise is of the wood screw type used on Bench J. Weight, 155 pounds..... Each, $24.15

H. S. & Co. Machinists' Benches

Have double-dovetailed feature described on page 17

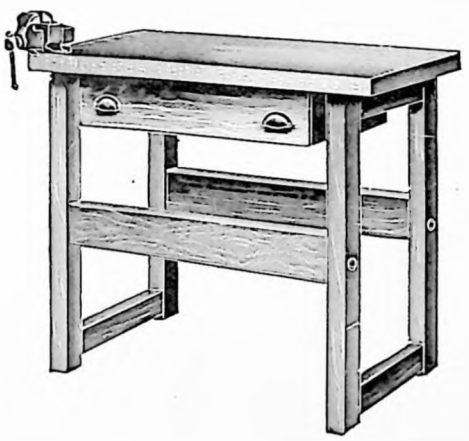


ILLUSTRATION No. 27V

Made of hard maple shellacked. The top is 48 inches long, 23 inches wide and 2 inches thick. Stands 38 inches high. Drawer is 30 inches wide, 17½ inches deep, 5 inches high. Weight: No. 27, 85 pounds; No. 27V, 110 pounds.

		Each
No. 27	Without Vise	$15.40
No. 27V	With Parker No. 102 Eclipse Vise, 3-inch jaw, open 4 inches	22.10

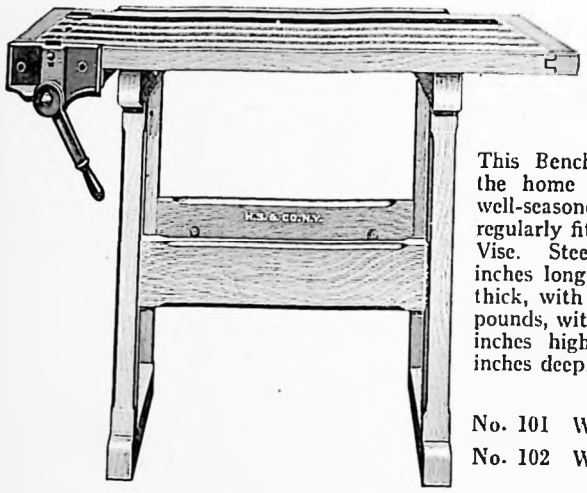
ILLUSTRATION No. 28V

Made of hard maple, shellacked top, is 48 inches long, 23 inches wide and 2 inches thick. Stands 38 inches high. Three drawers, each 23 inches wide, 19 inches deep, 8 inches high. Cupboard, 30 inches high, 20 inches deep and 10½ inches wide. Weight: No. 28, 185 pounds; No. 28V, 210 pounds.

		Each
No. 28	Without Vise	$27.30
No. 28V	With Parker No. 102 Eclipse Vise, 3-inch jaw, open 4 inches	34.00

H. S. & Co. Manual Training and Home Benches

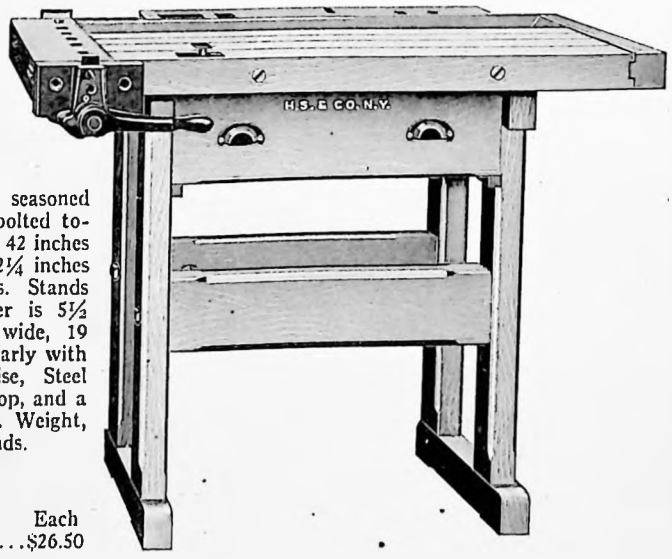
ILLUSTRATION No. 101



This Bench is designed primarily for the home workshop. It is made of well-seasoned maple throughout and is regularly fitted with No. 3 Rapid-acting Vise. Steel Bench Dog. Top is 42 inches long, 22 inches wide, 1¾ inches thick, with 7 inches recess. Weight, 90 pounds, without drawer. Drawer is 5½ inches high, 22 inches wide, and 19 inches deep.

		Each
No. 101	Without drawer	$21.50
No. 102	With drawer	24.75

ILLUSTRATION No. 103



Made of thoroughly seasoned maple. Top, which is bolted together as well as glued, is 42 inches long, 22 inches wide, and 2¼ inches thick, with 7 inches recess. Stands 32 inches high. Drawer is 5½ inches high, 22 inches wide, 19 inches deep. Fitted regularly with No. 3 Rapid-acting Vise, Steel Dog, Malleable Bench Stop, and a Tool Rack 30 inches long. Weight, without drawer, 115 pounds.

No. 103	Each
With drawer	$26.50

H. S. & Co. Manual Training Benches

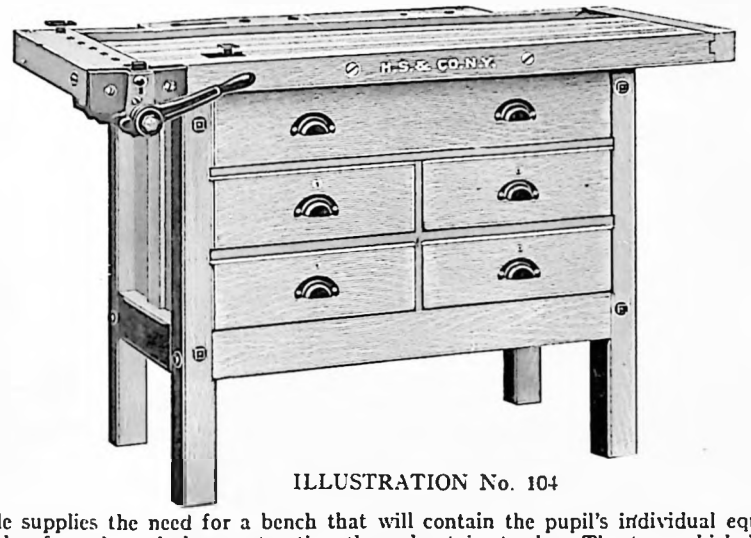


ILLUSTRATION No. 104

This style supplies the need for a bench that will contain the pupil's individual equipment. It is made of maple and the construction throughout is sturdy. The top, which is bolted together as well as glued, is 52 inches long, 22 inches wide, 2¼ inches thick, with 7 inches recess. The drawers measure 5 inches high, 17 inches deep, and 32 and 15½ inches long. Stands 32 inches high. Fitted with No. 3 Rapid-acting Vise, Steel Dog and Malleable Bench Stop. Weight, 215 pounds.....Each, $45.50

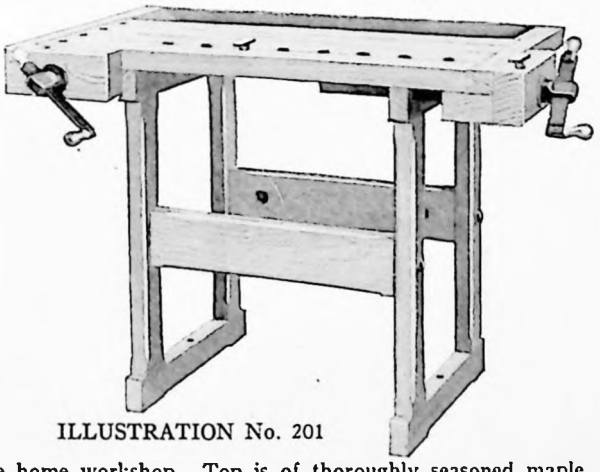


ILLUSTRATION No. 201

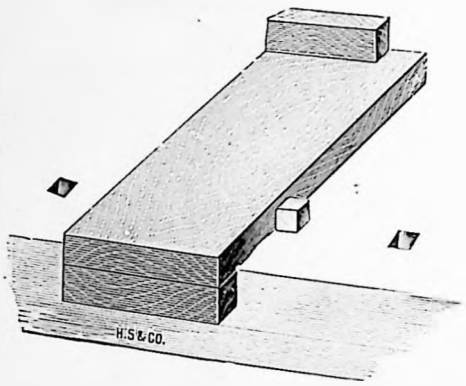
Designed for the home workshop. Top is of thoroughly seasoned maple, not bolted, but glued together in the most approved style. The two wood vises have steel screws, 1 inch in diameter, traveling in an iron nut securely housed in the back jaw, the screw being operated by a counterbalanced crank, adding greatly to their strength and the speed and ease in operation. Dimensions: 32 inches high; top, 48 inches long; width, 22 inches; vise jaws, 12 inches long, opens 8 inches

		Each
No. 201	Work Bench, 2 vises, no drawers	$24.25
No. 202	Work Bench, 2 vises, 1 drawer	27.00
No. 203	Work Bench, 1 vise, no drawers	20.60
No. 204	Work Bench, 1 vise, 1 drawer	23.25

Bench Appliances

H. S. & Co.

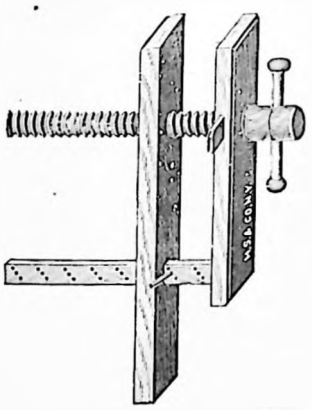
Bench Hook



Made of selected maple. For odd sawing and chiselling, so that the bench will not be marred. 4½ x 12 inches.

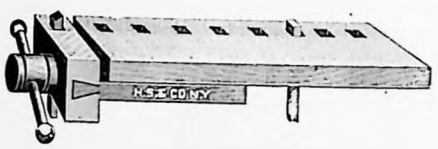
Per dozen $6.00
Each ..... .56

Wood-Carver's Vise



Made of selected maple, with 2⅜ x 19 inches hickory screw. It is 44 inches long, 6 inches wide, and opens 14 inches.

Each $9.00



Wood-Carver's Bench

Made of selected maple, with 1½ x 18 inches hickory screw. It is 37½ inches long over all, 8½ inches wide, and opens 11 inches. With stops.

Each $12.25

Bench Stops

H. S. & Co.

Wrought Iron	Small	Medium	Large
Thickness, inches	¾ x ⅞	⅞ x 1	⅞ x 1
Length, inches	6½	7½	9
Per dozen pairs	$12.00	$13.35	$16.00
Per pair	1.20	1.34	1.60

Style L

Style J

	Per Dozen	Each
Style L, 6 inches long, Maple	$1.08	$0.10
Style J, 6 inches long, Maple	1.08	.10

Above prices are subject to change without notice

Bench Stops

Weston

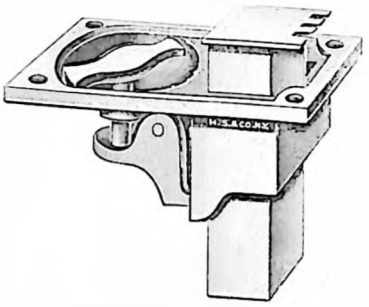


ILLUSTRATION No. 1

Weston

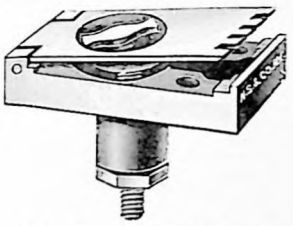
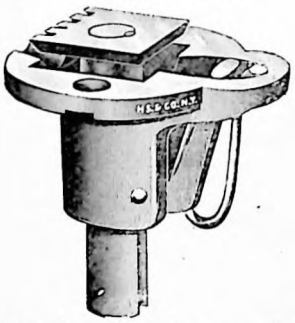


ILLUSTRATION No. 2

	Per Dozen	Each
Weston No. 1	$12.96	$1.20
Weston No. 2	8.64	.80

Sheldon Quick Set



Sheldon Quick Set, Each....$1.30

Smith

ILLUSTRATION No. 1

	Per Dozen	Each
Smith No. 1	$7.20	$0.67

Morrill

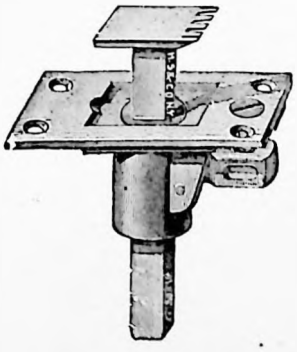


ILLUSTRATION No. 1

Sargent

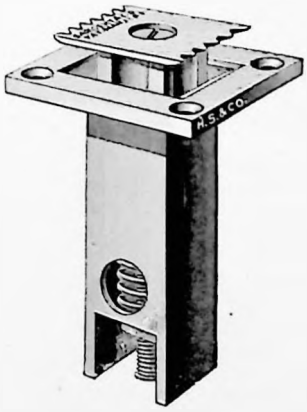


ILLUSTRATION No. 41

Morrill No. 1, Each	$1.12
Sargent No. 41, Per Dozen	7.80
Sargent No. 41, Each	.72

H. S. & Co. "Tourist Autokit"

The H. S. & Co. Tourist Autokit is contained in a heavy, serviceable canvas roll, edged with leather. Every tool is especially selected with reference to its quality and adaptability for use in an automobile kit, and we believe we are justified in asserting that the "Tourist" embodies every possible permanent and emergency value that can be included in a kit of this size.

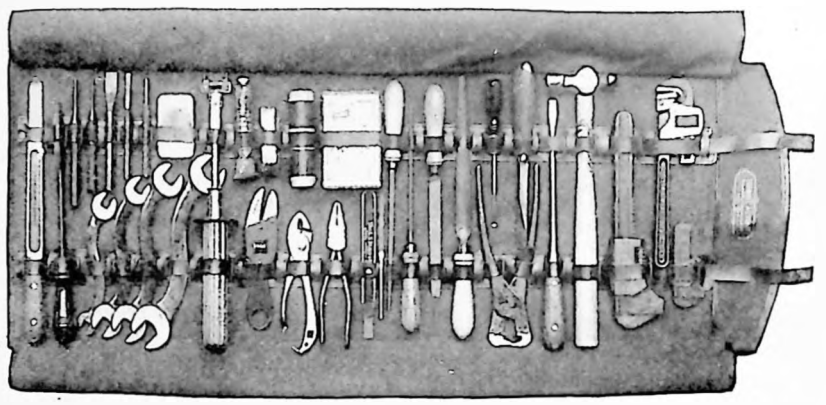


ILLUSTRATION No. 1

Itemized list of contents is as follows:

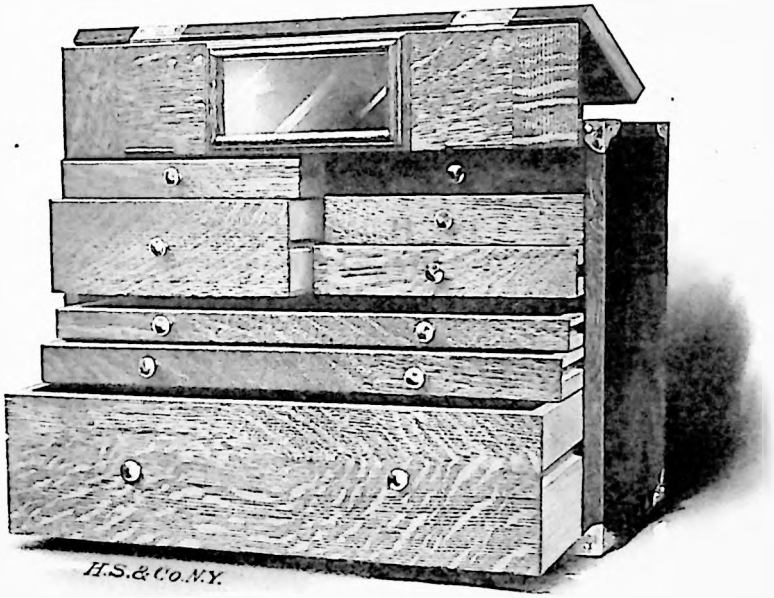
Perfect Handle Tire Tool.
Bearing Scraper, No. 7, 8 inches, 3-square hollow ground.
Adjustable Alligator Pipe Wrench, 7 inches, black finish, grips pipe up to ¾-inch and rods and nuts up to 1 inch.
Drop-forged S Wrench, S. A. E. Standard, ¼ and $\frac{5}{16}$ inch.
Drop-forged S Wrench, S. A. E. Standard, ⅜ and $\frac{7}{16}$ inch.
Drop-forged S Wrench, S. A. E. Standard, ⅝ and $\frac{11}{16}$ inch.
Drop-forged S Wrench, S. A. E. Standard, ½ and $\frac{9}{16}$ inch.
H. S. & Co. Side-cutting Pliers, No. 1050, 7 inches.
Knight Combination Auto Pliers, No. 50, 7 inches, nickel-plated, suitable for use as screwdriver, wire cutter, pipe wrench, gas and air-tank keys, cotter pin puller and tap wrench.
Starrett Steel Rule, No. 320, 6 inches, graduated in 32nds and 64ths.
Nicholson Coil File.
K. & F. Square Bastard File, 7 inches, handled.
K. & F. Round Bastard File, 7 inches, handled.
K. & F. Flat Bastard File, 6 inches, handled.
K. & F. Half-round Bastard File, 8 inches, handled.
H. S. & Co. Tire Chain Tool.
Hurwood Screwdriver, 6 inches, No. 20.
Hurwood Screwdriver, 3-inch, No. 20.
Perfect Handle Machinist's Screwdriver, No. 9½, 4½-inch blade with square for wrench.
Atha Ball Pein Machinist's Hammer, No. 00, 12 ounces.
Billings Automobile Wrench, semi-finish, No. 3, 10 inches, opens 2 inches.
Billings Model 97, 4-inch Pocket Wrench, opens 1⅜ inches.
Trimo Pipe Wrench, 10 inches, grips pipe ⅛ to 1 inch.
Tinol Soldering Outfit.
¼-pound Electrician's Tape.
¼-pound Spool No. 18 Copper Wire.
¼-pound Spool No. 20 Copper Wire
Clover Valve Grinding Compound, 2 ounces.
B. M. Co. Valve Grinding Tool, complete.
Box of Assorted Spring Cotters.
H. S. & Co. Cold Chisel, ½-inch.
H. S. & Co. Cape Chisel, ⅜-inch.
H. S. & Co. Octagon Center Punch, ⅜-inch.
B. M. Co. Pin Punch, $\frac{5}{32}$-inch. Size 2.
B. M. Co. Pin Punch, ¼-inch. Size 5.

Each

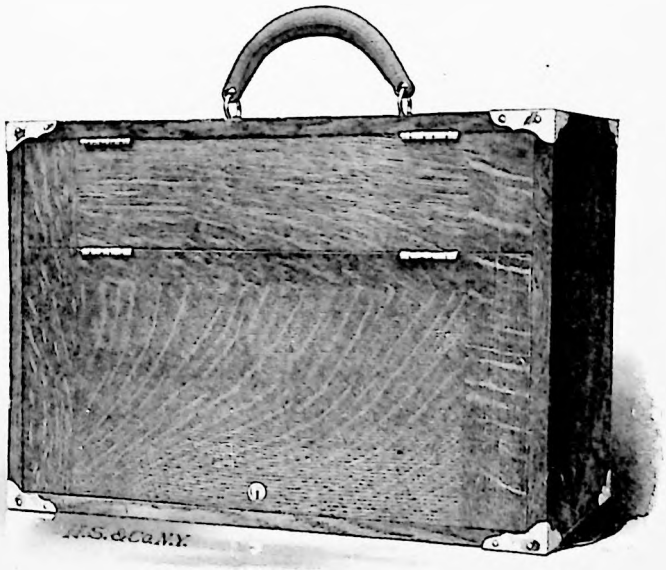
Set complete with roll.....$24.25

Machinists' Portable Tool Cases

H. S. & Co.



SHOWING CASE OPEN AND DRAWERS EXPOSED



SHOWING CASE CLOSED AND LOCKED

See page following for prices and descriptions

Machinists' Portable Tool Cases

H. S. & Co.

The most practical portable Tool Cases for machinists. The drawers are so arranged that every available inch can be utilized, and tools may be so distributed that each one can quickly and easily be found without first handling a number of other tools which have hurriedly been placed on top of the one wanted. With the exception of the bottoms and sides of drawers, they are made throughout of thoroughly kiln-dried solid (not veneered) oak or mahogany, which will not warp nor twist, and very carefully and handsomely polished and finished; the corners are hand dovetailed and the workmanship is of the very best. The trimmings are of polished brass. Each case has a brass spring lock with two flat steel keys and a comfortable leather handle for convenience in carrying.

The drawers run on hardwood slides, have brass polished knobs, and bottoms are lined with genuine felt.

Machinists will find the little mirror which is placed on the inside of the case a very handy and convenient addition.

		Each
No. 120	Oak 15⅝ inches long	$15.00
No. 125	Mahogany, 15⅝ inches long	15.50
No. 121	Oak, 20 inches long	22.50
No. 126	Mahogany, 20 inches long	25.00

Approximate weights:

No. 120 Oak, packed for shipment, 20 pounds.
No. 120 Oak, not packed for shipment, 14½ pounds.
No. 125 Mahogany, packed for shipment, 19½ pounds.
No. 125 Mahogany, not packed for shipment, 14 pounds.
No. 121 Oak, packed for shipment, 25 pounds.
No. 121 Oak, not packed for shipment, 17¾ pounds.
No. 126 Mahogany, packed for shipment, 24¼ pounds.
No. 126 Mahogany, not packed for shipment, 17 pounds.

No. 120, Oak; No. 125, Mahogany.

Outside dimensions when closed: 15⅝ inches long, 8 inches deep, 10¾ inches high.

Inside dimensions of the drawers:

First	6½ inches long, 6⅛ inches deep,	¾ inch high
Second	6½ inches long, 6⅛ inches deep,	2 3/16 inches high
Third	6½ inches long, 6⅛ inches deep,	¾ inch high
Fourth	6½ inches long, 6⅛ inches deep,	1 inch high
Fifth	6½ inches long, 6⅛ inches deep,	11/16 inch high
Sixth	14⅛ inches long, 6⅛ inches deep,	½ inch high
Seventh	14⅛ inches long, 6⅛ inches deep,	1 inch high
Eighth	14⅛ inches long, 6⅛ inches deep,	3 3/16 inches high

No. 121, Oak; No. 126, Mahogany.

Outside dimensions when closed: 20 inches long, 8 inches deep, 10¾ inches high.

Inside dimensions of the drawers:

First	8¾ inches long, 6⅛ inches deep,	¾ inch high
Second	8¾ inches long, 6⅛ inches deep,	2 3/16 inches high
Third	8¾ inches long, 6⅛ inches deep,	¾ inch high
Fourth	8¾ inches long, 6⅛ inches deep,	1 inch high
Fifth	8¾ inches long, 6⅛ inches deep,	11/16 inch high
Sixth	18½ inches long, 6⅛ inches deep,	½ inch high
Seventh	18½ inches long, 6⅛ inches deep,	1 inch high
Eighth	18½ inches long, 6⅛ inches deep,	3 3/16 inches high

See preceding page for illustration

Machinists' Tool Cases

H. S. & Co.

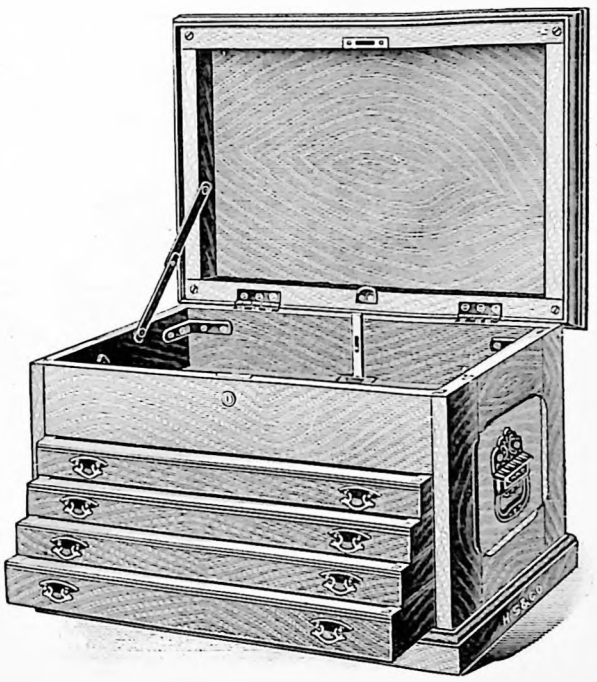


ILLUSTRATION No. 4

These Chests are all carefully made of selected wood, are nicely finished in every respect, have nickel-plated trimmings, flat-keyed locks and automatic device for locking all drawers. We recommend particularly the No. 4 as most excellent value.

Nos.		Each
1	Quartered Oak, with 2 drawers	$13.00
2	Quartered Oak, with 3 drawers	13.75
4	Quartered Oak, with 4 drawers	13.00

Nos.	Outside, Inches	Receptacle Under Lid, Inches	First Drawer, Inches	Second Drawer, Inches	Third Drawer, Inches	Fourth Drawer, Inches
1	20¾x12⅝x11¼	18x10⅛x3⅛	17⅛x 8⅞x1⅜	17⅛x 8⅞x2⅝		
2	23¾x14⅝x12⅞	21x11¾x3⅛	20 x10½x1	20 x10½x1½	20 x10½x2½	
4	18⅞x12¾x11⅝	16x10⅛x2½	15⅞x 8⅞x$\frac{15}{16}$	15⅛x 8⅞x$\frac{15}{16}$	15⅛x 8⅞x$\frac{15}{16}$	15⅛x8⅞x1$\frac{5}{16}$

Carpenters' Tool Chests

H. S. & Co.

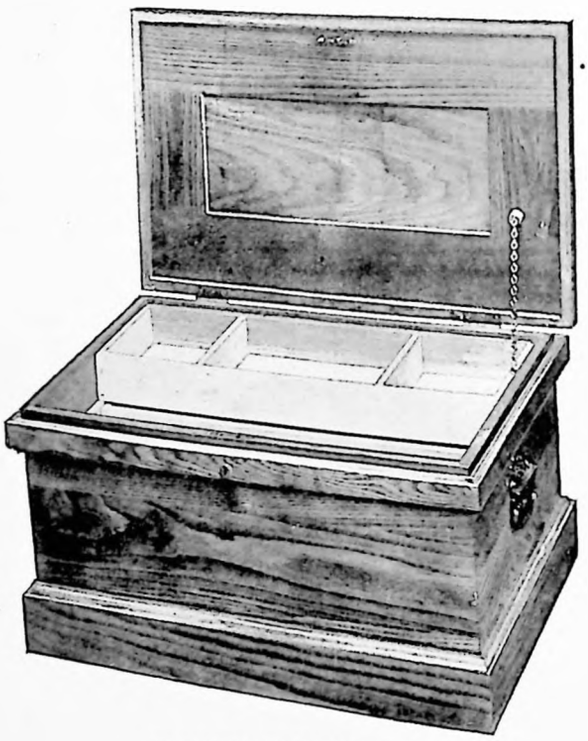


ILLUSTRATION No. 240

These Chests are made of selected chestnut, substantially constructed, with heavy hardwood mouldings, varnish finish. Are fitted with lock and key and drop handles, and have removable sliding trays. Nos. 240 to 270 have dovetailed corners. Nos. 260 and 270 have saw racks.

Nos.	Approximate Sizes Inside Long, Wide, Deep Inches	Number of Trays	Each
240	22x10½x 8½	2	$6.40
250	25x12½x 9½	2	7.65
260	28x15 x14	2	25.50
270	32x18 x16	2	29.75

Above prices are subject to change without notice

Machinist Tools in Sets

Starrett

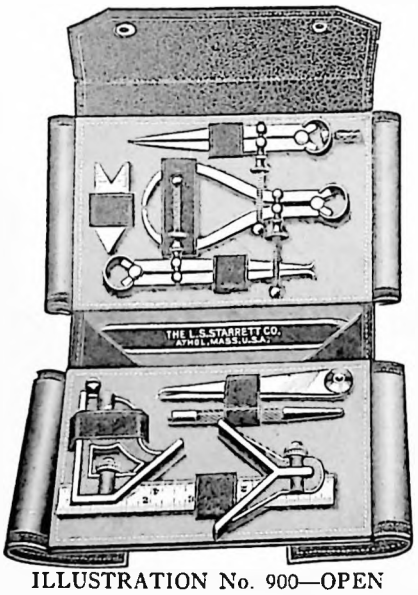


ILLUSTRATION No. 900—OPEN

No. 900

In folding leather case. Size of case folded, 7 inches by 4¾ inches by 1⅜ inches.

This set consists of the folding leather case and the following tools:

6-inch Combination Square, complete, No. 11.

Center Punch, No. 117B.

6-inch Flexible Steel Rule in pocket case, No. 321.

Center Gage, No. 390.

4-inch Caliper, No. 241.

4-inch Outside Caliper with solid nut, No. 79.

4-inch Inside Caliper with solid nut, No. 73.

4-inch Divider with solid nut, No. 83.

No. 900 Per Set $7.00

H. S. & Co.

No. 28

Users of machinists' tools know that the Brown & Sharpe and Starrett tools are considered to be the best on the market. Outfit No. 28 contains tools of both of these makes.

This outfit is not intended to cover a full equipment, but is only suggested to those who wish the necessary tools for a start and who intend to increase the equipment as further tools are needed. Outfit contains following tools:

1 Parker Eclipse Vise, No. 102.
1 Hammond Ball Pein Machinists' Hammer, No. 0.
1 Starrett Combination Square, with Center Head, No. 11, 9-inch.
1 Starrett Nickel-plated Hack Saw Frame, No. 140, with blade.
1 Pair Brown & Sharpe Rex Spring Dividers, No. 810, 4-inch.
1 Pair Brown & Sharpe Firm Joint Outside Calipers, No. 821, 6 inches.
1 Pair Brown & Sharpe Firm Joint Inside Calipers, No. 822, 4 inches.
1 Brown & Sharpe Spring Tempered-steel Rule, No. 300, 6 inches.
1 Starrett Steel Scriber, No. 70A.
1 H. S. & Co. Knurled Prick Punch, No. 11.
1 H. S. & Co. Knurled Center Punch, No. 10, ⅜ inch.
1 H. S. & Co. Cold Chisel, ⅝ inch.
1 H. S. & Co. Cape Chisel, ½ inch.
1 Handled K. & F. Flat Bastard File, 10 inches.
1 Handled K. & F. Hand Second-cut File, 10 inches.
1 Handled K. & F. Half-round Second-cut File, 10 inches.
1 Handled K. & F. Half-round Smooth File, 6 inches.
1 Handled K. & F. Round Second-cut File, 6 inches.

No. 28 Per Set $17.75

Machinist Tools in Sets

Starrett

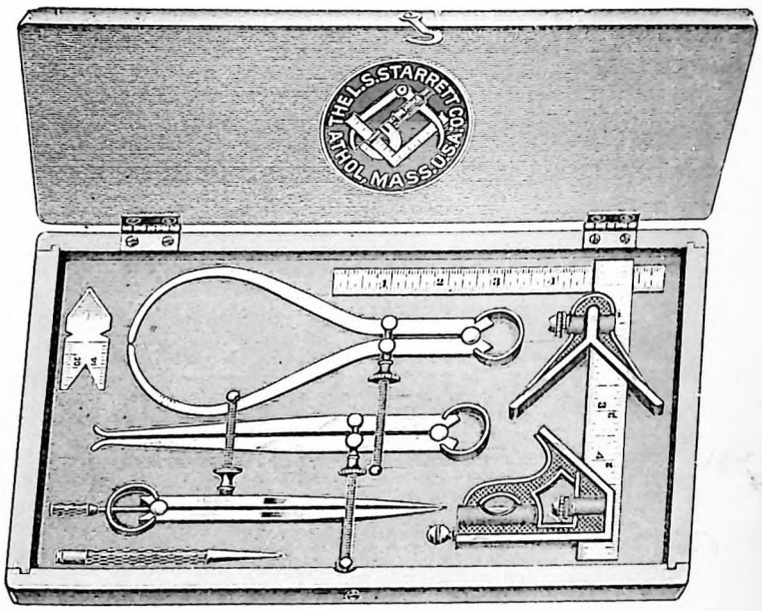


ILLUSTRATION No. 901

In nicely finished wooden case. Size of case, 12 inches by 7 inches by 1½ inches, consists of the wooden case and the following tools:

No. 11	6-inch Combination Square, complete.
No. 321	6-inch Flexible Steel Rule in pocket case.
No. 117B	Center Punch.
No. 390	Center Gage.
No. 77	5-inch Divider with solid nut.
No. 79	6-inch Outside Caliper with solid nut.
No. 73	6-inch Inside Caliper with solid nut.

No. 901 Per Set $8.00

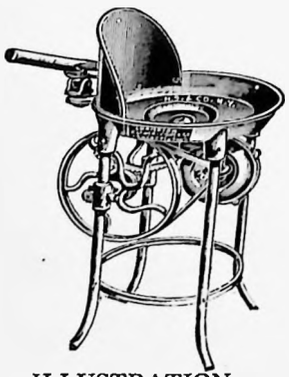


ILLUSTRATION
FORGE 151

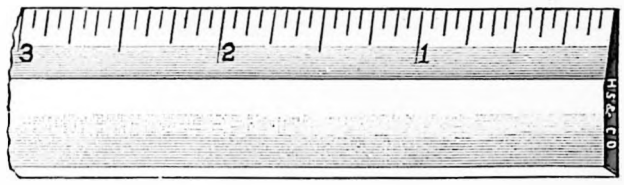
Blacksmith's Tools in Sets

H. S. & Co.

1 Champion Agricultural Lever Forge, No. 151.
1 Hay-Budden Anvil, 75 pounds.
1 Pair Straight-Lipped Blacksmith's Tongs, No. 10, 18 inches.
1 Pair Single Pick-up Tongs, 22 inches.
1 Hardie, to fit anvil, No. 1200, ¾ inch.
1 Bottom Fuller, to fit anvil, No. 1220, ⅝ inch.
1 Bottom Swage, to fit anvil, No. 1200, ¾ inch.
1 Flatter, No. 1230, 2 inches, with handle.
1 Top Fuller, No. 1210, ⅝ inch, with handle.
1 Top Swage, No. 1190, ¾ inch, with handle.
1 Atha Engineer's Hammer, No. 3.
1 Atha Ball Pein Machinist's Hammer, No. 1.
1 Handled K. & F. Flat Bastard File, 10 inches.
1 Stanley Boxwood Rule, No. 61, 2-foot, 4-fold.

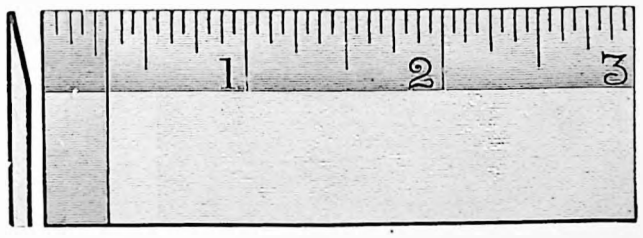
No. 30 Per Set $34.75

Manual Training Rules



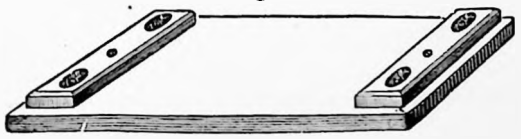
No. 3 Boxwood, 12 inches long, $\frac{15}{16}$-inch wide, graduated as shown, from right to left.
Per Dozen $2.70
Each ..... .25

No. 150 Maple, 12 inches long, $\frac{7}{8}$-inch wide, graduated from left to right in 16ths.
Per Gross $5.40
Per Dozen ..... .50
Each ..... .05



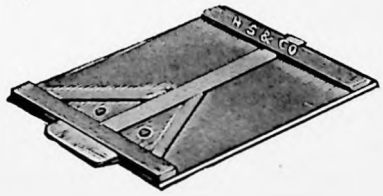
No. 1 Boxwood, 12 inches long, $1\frac{1}{16}$ inches wide, graduated in 16ths from left to right, brass bound ends.
Per Dozen $6.65
Each ..... .67

Drawing Boards



		Each
No. 444	Has cleats on under side as illustration.	
No. 442	Without cleats, flush on both sides.	
No. 442	18 x 24 inches, $\frac{1}{2}$-inch thick. Clear white pine	$1.30
No. 444	18 x 24 inches, $\frac{1}{2}$-inch thick. Clear white pine	1.70
No. 444	20 x 26 inches, $\frac{7}{8}$-inch thick. Clear white pine	2.25

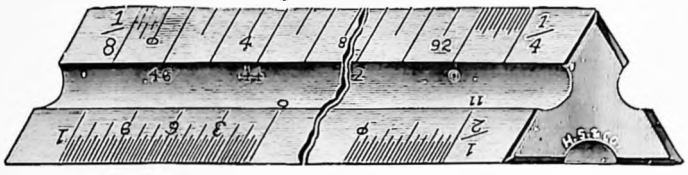
Drawing Outfits



Consists of 1 Drawing Board, 1 T-Square and 2 Triangles.	Each
No. 2 13 x 19-inch board	$1.50
No. 3 17 x 22-inch board	2.25

Drafting Scales

Triangular Boxwood



Graduated $\frac{3}{32}$, ⅛, $\frac{3}{16}$, ¼, ⅜, ½, ¾, 1, 1½ and 3 inches to the foot, and one edge 16 to the inch.

		Each
No. 488	6 inches long	$0.50
No. 8881	12 inches long	.55
No. 574	With white edge, 6 inches long	1.85
No. 575	With white edge, 12 inches long	2.60

T-Squares

Stationary Heads

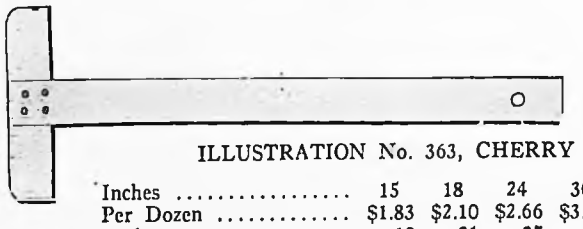


ILLUSTRATION No. 363, CHERRY

Inches	15	18	24	30	36
Per Dozen	$1.83	$2.10	$2.66	$3.16	$3.83
Each	.18	.21	.27	.32	.38

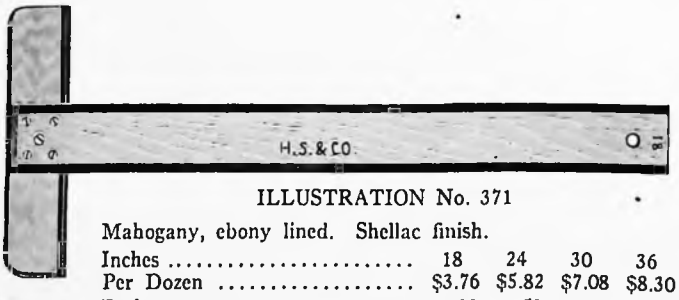


ILLUSTRATION No. 371

Mahogany, ebony lined. Shellac finish.

Inches	18	24	30	36
Per Dozen	$3.76	$5.82	$7.08	$8.30
Each	.38	.58	.70	.83

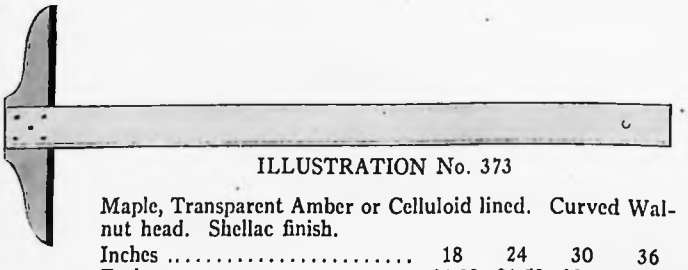


ILLUSTRATION No. 373

Maple, Transparent Amber or Celluloid lined. Curved Walnut head. Shellac finish.

Inches	18	24	30	36
Each	$1.20	$1.50	$2.00	$2.50

H. S. & Co. Manual Training Knives

All knives on this page are made of finest crucible tool steel, are accurately ground and finely finished. They are carefully and thoroughly tempered and handles are shaped to give a firm yet easy grip. Fully warranted. We have carefully studied every detail of these goods and have embodied all points of value gained in our experience since 1848 in supplying tools and equipment to schools, colleges and institutions.

Sloyd

Shanks run through handle and riveted on end.

	Per Dozen	Each
No. 6 2¾-inch blade	$4.75	$0.44
No. 7 2½-inch blade	4.30	.40

	Per Dozen	Each
No. 7A 2½-inch blade	$4.30	$0.40

	Per Dozen	Each
No. 8 2⅜-inch blade	$3.00	$0.30

STYLE C

Blades are riveted into handles, preventing any looseness or possibility of ever coming out. Heavy nickel-plated oval ferrules, oval rubberoid finish handles, closed ends adding stiffness to blades and attached so they cannot come off.

	Per Dozen	Each
2½-inch blade	$5.10	$0.47

H. S. & Co. Manual Training Knives

Carvers

		Per Dozen	Each
No. 1	Extra quality, 2½-inch blade	$2.95	$0.27

		Per Dozen	Each
No. 2	Extra quality, 1¾-inch blade	$2.70	$0.25

		Per Dozen	Each
No. 3	Extra quality, 2¼-inch blade	$3.78	$0.35

Particular attention is called to the No. 3 Knife, as it is the proper "shape" and size best adapted for chip carving.

Knives

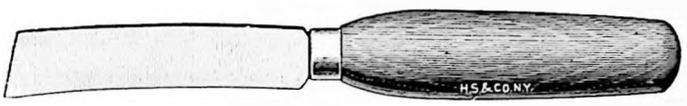
Wood or Leather

These knives are made of the best crucible tool steel, correctly shaped, tempered and ground for the purpose. Handles are shaped to give a firm grip, and each knife is finely finished.

SQUARE POINT

		Per Dozen	Each
No. 1	2⅝-inch blade	$2.27	$0.21
No. 3	3½-inch blade	2.27	.21
No. 4	4-inch blade	2.27	.21
No. 5	5-inch blade	2.60	.24
No. 76	3¾-inch blade	4.32	.40
No. 78	5-inch blade	6.48	.60

Knives



PARING

	Per Dozen	Each
No. 2 3-inch blade	$2.27	$0.21

SHARP POINT

	Per Dozen	Each
No. 2 3-inch blade	$2.27	$0.21
No. 79 3⅝-inch blade, heavy	4.32	.40

GOTHIC POINT

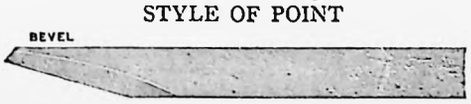
	Per Dozen	Each
No. 3 3½-inch blade	$2.27	$0.21

Bench Knives with Blades

Dexter

Made of highest grade steel, polished, correctly shaped. Parallel jaws. All parts interchangeable.

STYLE OF POINT



	Per Dozen	Each
No. 2 Complete with blade	$7.90	$0.73
Extra Blades, 4¾ inches long, ⅞ inch wide	2.16	.20

Knives

Linoleum or Oilcloth

These knives are all made of the best quality of crucible steel, finely and correctly tempered, polished and ground.

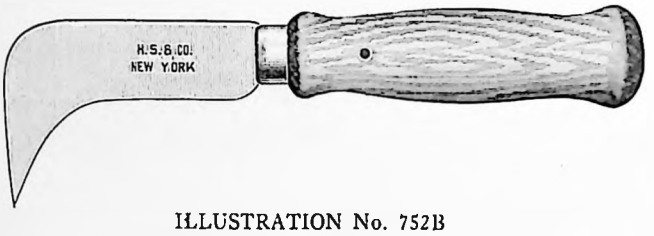


ILLUSTRATION No. 752B

	Per Dozen	Each
With burnt wood handle, nickel ferrule, 3½-inch blade.....	$4.80	$0.48

ILLUSTRATION No. X740

	Per Dozen	Each
With round rubberoid finish handle, extra fine quality steel blade, 3½ inches long, round, closed end, nickel ferrule.....	$4.80	$0.48

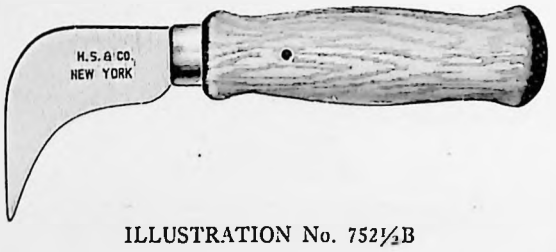


ILLUSTRATION No. 752½B

	Per Dozen	Each
With burnt wood handle, nickel ferrule, 2½-inch blade.....	$4.80	$0.48

Hand Saws

Disston

ILLUSTRATION No. 112

Warranted extra refined London spring-steel, thin skew back, patent-ground and tempered. Selected and highly polished blade. Carved and polished applewood handle. Improved brass screws.

Length of Blade, inches	24	26
Crosscut, each	$3.85	$4.10
Rip, each	3.85	4.10

ILLUSTRATION No. D115

Warranted extra refined London spring-steel, patent-ground and tempered. Skew back. Rosewood handle, carved and polished. Nickel-plated screws.

Length of Blade, inches	22	24	26
Crosscut, each	$4.75	$5.00	$5.30
Rip, each	4.75	5.00	5.30

ILLUSTRATION No. 12

Warranted extra refined London spring-steel, patent-ground and tempered. Selected and highly polished blade. Carved and polished applewood handle. Improved brass screws.

Length of Blade, inches	20	22	24	26	28
Rip, each	3.25	3.50	3.75	4.00	4.50
Rip, each	3.25	3.50	3.75	4.00	4.50

Hand Saws

Disston

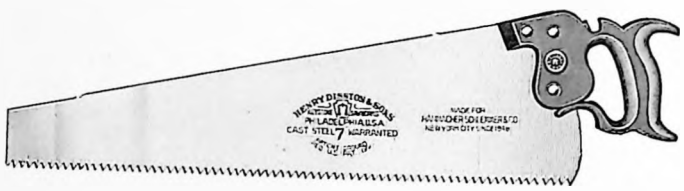


ILLUSTRATION No. 7

Warranted. Crucible steel, patent-ground and tempered, grained blade, beech handle, polished. Improved brass screws.

Length of Blade, inches.....	16	18	20	22	24	26	28
Crosscut, each	$2.00	$2.15	$2.30	$2.45	$2.55	$2.65	$3.15
Rip, each	2.00	2.15	2.30	2.45	2.55	2.65	3.15

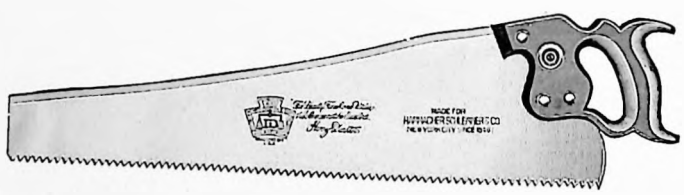


ILLUSTRATION No. D8

Warranted refined crucible steel, patent-ground and tempered, skew back, applewood handle, polished improved brass screws. This Saw combines the popular "skew back," the peculiar shaped butt or heel which, with the improved screws, makes it almost impossible to work loose from the handle and gives the full sweep of the saw without the possibility of catching in the work.

Length of Blade, inches.....	20	22	24	26	28
Crosscut, each	$2.65	$2.80	$2.90	$3.00	$3.50
Rip, each	2.65	2.80	2.90	3.00	3.50

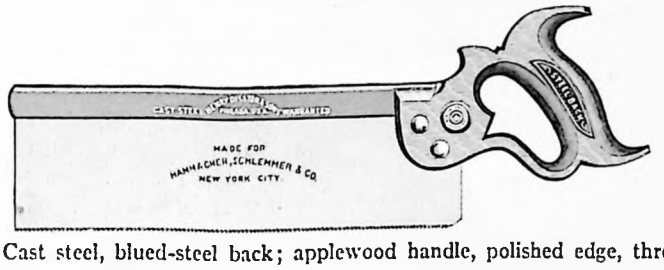
ILLUSTRATION No. D17

Skew Back, refined crucible steel blade, polished hardwood handle, brass screws. A Double Duty Saw particularly adapted for all kinds of general construction work. Alternate sections of five regular cross-cut, then two ripping teeth separated by a deep gullet for full clearance and easy running.

Length of Blade, inches.....	26
Each	$3.25

Back Saws

Disston No. 4



Warranted. Cast steel, blued-steel back; applewood handle, polished edge, three improved brass screws.

Length of Blade, inches	8	10	12	14	16
For wood, each	$1.70	$1.85	$2.10	$2.35	$2.60

Disston—For Use in Mitre Boxes

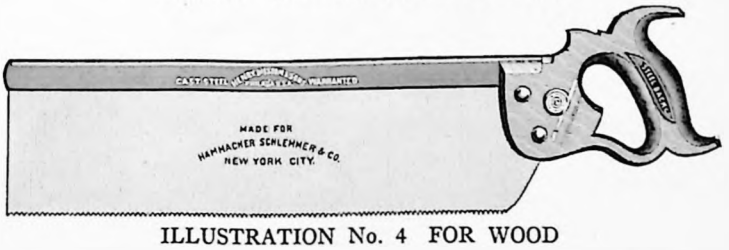


ILLUSTRATION No. 4 FOR WOOD

Warranted. Cast steel, blued-steel back; applewood handle, polished edge, three improved brass screws.

Length of Blade, inches	20	22	24	24	26	26
Width under back	4	4	4	5	4	5
Each	$3.15	$3.40	$3.65	$4.10	$3.90	$4.40

No. 4M FOR METAL

We also furnish this saw in 24 and 26-inch lengths, either 4 or 5 inches wide under back, with special temper for metal-covered moldings, and ground thin toward the back so as to run without set. This saw is known as No. 4M and is furnished at same prices as No. 4.

Disston Adjustable

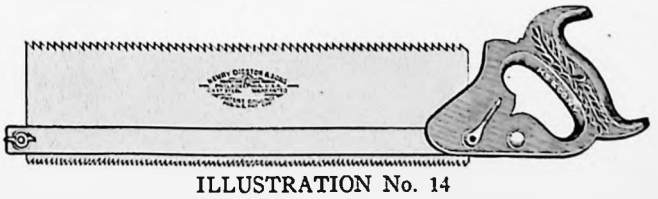


ILLUSTRATION No. 14

Adapted for tenoning, shouldering, dovetailing, cog-cutting, or any purpose where a definite depth of cut is required.

Size of Blade, inches	14 x 3¼
Each	$2.85

Plumbers' Saws

For Wood or Metal

Disston

ILLUSTRATION No. 6

Beech handle, varnished edges, three brass screws. One edge toothed 6 points; the other 8 points. The coarse teeth are for sawing wood. The fine teeth for sawing wood in which nails are imbedded, lead pipe, etc.

Length of Blade, inches	16	18
Each	$1.20	$1.30

ILLUSTRATION No. 10—12 POINTS TO ONE INCH

Carved and polished cherry handle, adjustable to various positions. Made particularly for use on work encountered by plumbers, steamfitters and carpenters in making repairs where it is necessary to cut through timbers in which nails may be imbedded or steel-covered molding.

Length of Blade, inches	20	24
Each	$2.25	$2.75

Flooring Saws

Disston

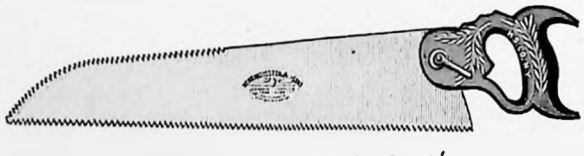


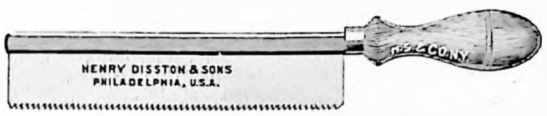
ILLUSTRATION No. D19—9 POINTS TO ONE INCH

Cherry handle, carved and polished. Adjustable to various positions. Specially designed to cut out sections of floors, ceilings or partitions to any desired depth, without necessity of boring, chiseling, etc. The blade is warranted cast steel and is reversible, interchangeable and adjustable.

Length of Blade, inches	20
Each	$2.90

Dovetail Saws

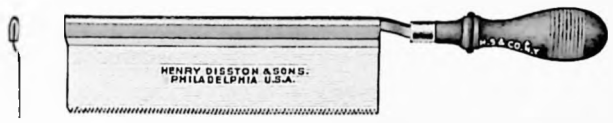
For Wood or Metal



WITH STRAIGHT HANDLE

Extra quality spring steel blade with special temper for cutting wood and metal. 17 points to inch. Brass-plated steel back. 1½ inches wide under back.

Length of Blade, inches	6	8	10	12
No. 69 Each	$1.20	$1.30	$1.45	$1.55



WITH OFFSET HANDLE

With offset blade, as in end view. For working close to right-angle obstruction. Offset handle, straight part of blade is 1¾ inches wide.
Extra quality spring-steel blade, with special temper for cutting wood and metal. 17 points to inch. Brass-plated steel back.

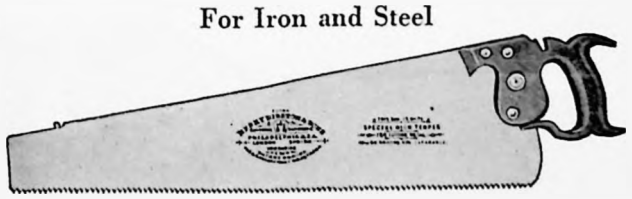
Length of Blade, inches	8	10	12
No. 71 Each	$1.40	$1.50	$1.65

Joiner or Bench Saws

Applewood handle, varnished edge. Blade 16 x 2⅛ inches at handle, 18 gauge, 15 point.
Each $1.60

Hand Hack Saw

For Iron and Steel



Made especially for use of Structural Iron Workers, particularly in places and positions where the ordinary hack frame cannot be used. Blade of special high temper, hollow ground for clearance, requiring no set on teeth. 12 points to inch. Do not attempt to set.

Length of Blade, inches	20	24
No. 340 Each	$3.15	$3.65

Pruning Saws

Disston

ILLUSTRATION No. 1 ADJUSTABLE HANDLE

Cherry handle, carved and polished, adjustable, with lever tightener, crucible steel blade, double edge, thrust cut on convex, draw cut on concave edge.

Length of Blade, inches	18
Each	$1.80

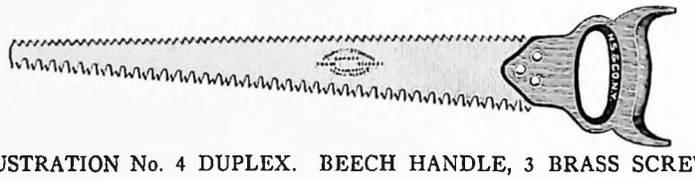


ILLUSTRATION No. 4 DUPLEX. BEECH HANDLE, 3 BRASS SCREWS

Length of Blade, inches	14	18
Each	$1.30	$1.45

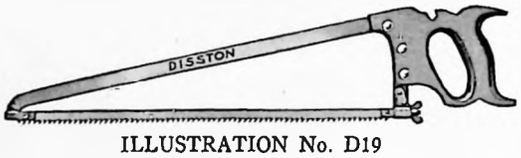


ILLUSTRATION No. D19

Flat steel back, narrow tapered point, beech handle with varnished edges, three brass screws. Handle has extra large hand hold for use with gloved hand. Blued-steel blade. Swivel stretcher.

Length of Blade, inches	18
Each	$1.75

ILLUSTRATION No. D24

Narrow point, crucible steel blade, copper handle with beechwood grip.

Length of Blade, inches	20
Each	$1.35

Compass Saws

Disston

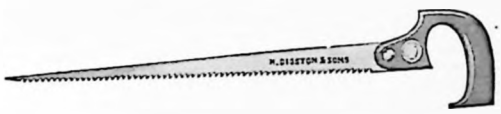


ILLUSTRATION No. 2

Crucible steel, applewood handle, brass screws.

Length of Blade, inches	10	12	14	16
Each	$0.60	$0.63	$0.65	$0.67

Keyhole Saws

Disston

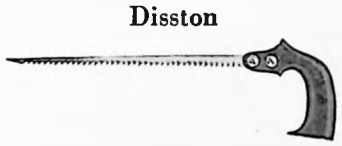


ILLUSTRATION No. 15

Cast steel, beech handle, brass screws.

Length of Blade, inches	10	12
Each	$0.36	$0.39

ILLUSTRATION No. 10

Complete with adjustable handle and blade. Each	$0.37
Extra blades. Each	.19

ILLUSTRATION No. 5

An inexpensive and convenient combination of keyhole saw, saw pad and screwdriver.

Complete with handle and blade. Each	$0.34
Extra blades. Each	.19

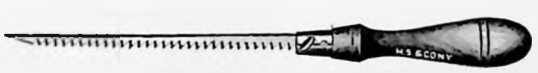


ILLUSTRATION No. 95

Round hardwood handle, polished, nickel-plated ferrule. The handle is slotted clear through permitting the adjustment of blade for length of cutting edge required. The blade, 10 inches long, ground thin back, is firmly held in place by means of a steel grip inside of handle, tightened by thumb-screw, which is nickel-plated.

Complete. Each	$0.58
Extra blades. Each	.29

Nest of Saws

Disston

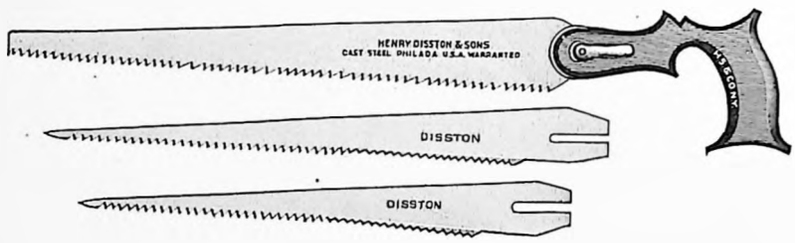
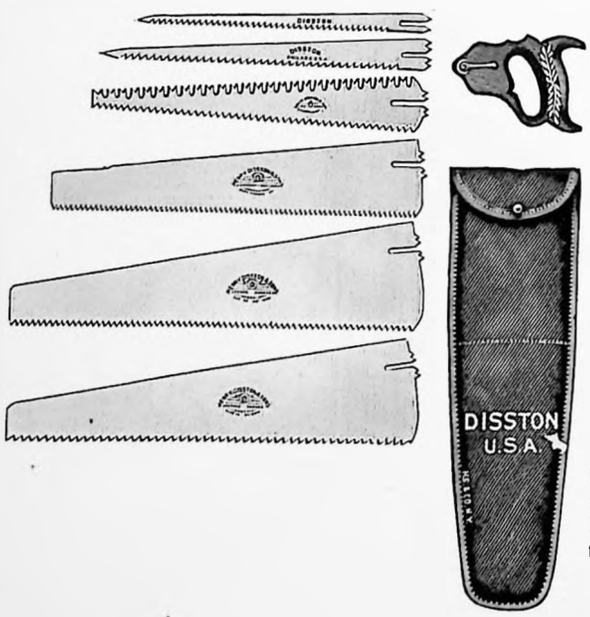


ILLUSTRATION No. 3

Complete, one each of above	$1.70
Handle and Tightener, each	.24
Keyhole Blade, 10 inch, each	.34
Compass Blade, 14 inch, each	.38
Pruning Blade, 16 inch, each	.74



"Handy Kit" Saws

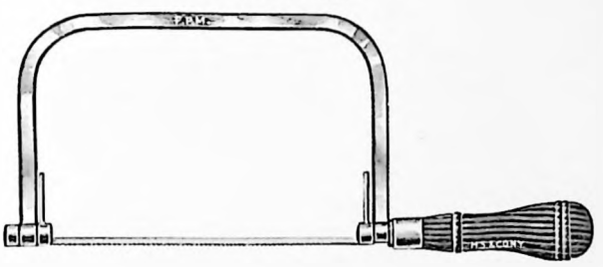
Disston

The blades are made of first quality crucible steel, carefully ground and polished. Hardwood handle, carved and polished. The butt of blade is specially formed to prevent wobbling, and the lever tightener provides for quick and easy attachment and detachment. The case is heavy canvas, leather-bound edges, and has separate compartments for each blade and a special pocket for the handle.

	Per Set
Set No. 101 contains all the above	$6.75
Set No. 104 contains all the above except Pruning and Plumbers' Blades	4.55

Coping Saws

F. P. M.

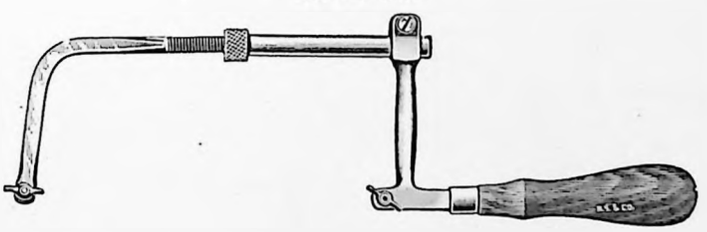


Frame is made of cold-drawn steel, especially tempered and highly finished. Blade is made of the best imported band-saw steel. Too highly tempered to make into loop at ends, so are equipped with pin fastening. Placed on a swivel, adjustable to any angle; $\frac{1}{16}$ inch wide, 6½ inches long and so evenly tempered it will cut light metal as easily as wood. Depth under back, 4⅝ inches.

Complete, 1 blade with each frame, per dozen	$7.35
Each	.68
Blades, per gross	4.00
Per dozen	.37

Jewelers

M. F. Co.



No. 600 Forged spring-steel, nickel-plated, cocobolo handle, 2¼ inches under back. Adjustable from 4 to 6 inches. Without blades, each $2.05

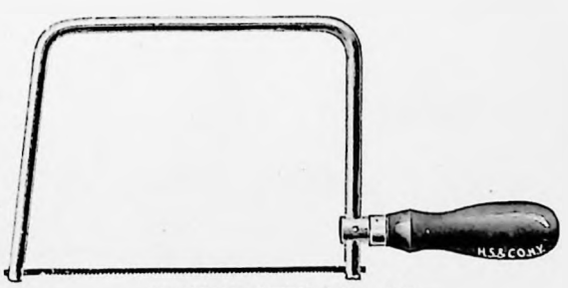


ILLUSTRATION No. 110

Nickel-plated wire frame, black hardwood handle, 4 inches under back. Blades have looped ends to attach to frame.

Complete, 1 dozen extra blades with each frame, per dozen	$3.45
Each	.32
Blades, per gross	1.50
Blades, per dozen	.14

Fret or Bracket Saw Frames

Griffin

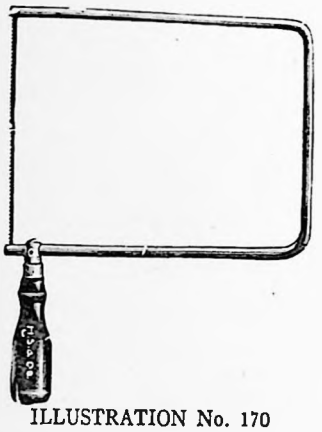


ILLUSTRATION No. 170

Because of their simplicity and the ease with which new blades can be put into these frames, a large number of prominent manual training schools have adopted them.

8 inches deep, steel wire frame, nickel-plated, one dozen extra blades with each frame.

Per dozen	$4.32
Each	.40
Blades, per gross	1.50
Per dozen	.14

M. F. Co.

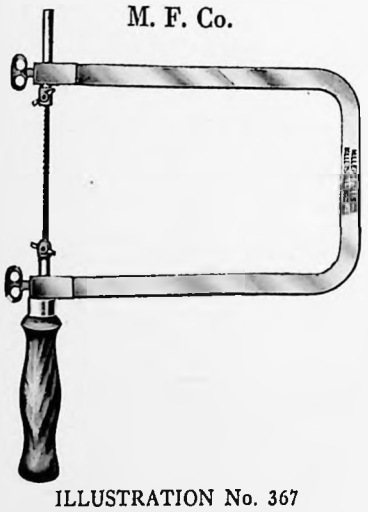


ILLUSTRATION No. 367

Nickel-plated, from best quality spring steel. Holds blades from 3 to 5 inches.

Depth, inches	10	12
Without blades, each.	$1.55	$1.70

H. S. & Co.

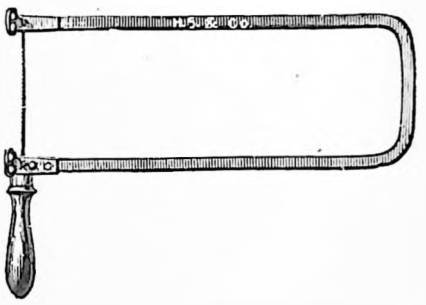


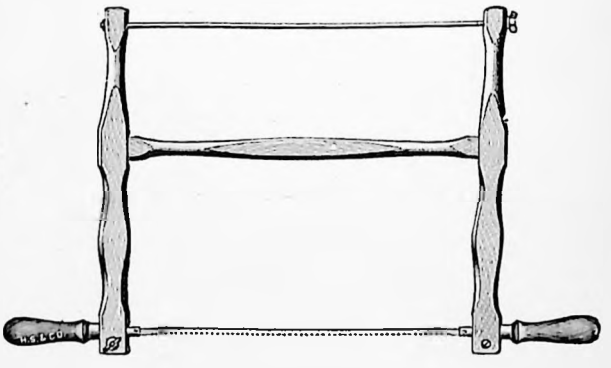
ILLUSTRATION No. 20

Light, for school use.

8 inches deep, steel, nickel-plated, without blades, each	$1.05
12 inches deep, steel, nickel-plated, without blades, each	1.10

Turning Saws

M. F. Co.



Birch wood, ebonized handles, steel tension rod. Index on each handle to show how far to turn. Friction regulated by screws.

Length of Blade, inches	14	18	24
Including one blade with each frame, each	$1.53	$1.60	$1.80

Buck Saws

Disston

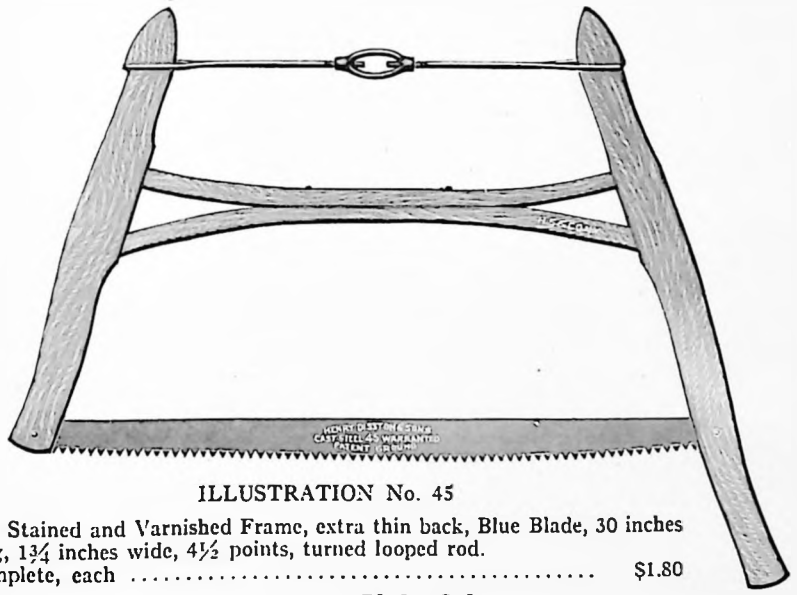


ILLUSTRATION No. 45

Red Stained and Varnished Frame, extra thin back, Blue Blade, 30 inches long, 1¾ inches wide, 4½ points, turned looped rod.
Complete, each $1.80

Blades Only

Per dozen $9.30
Each ..... .86

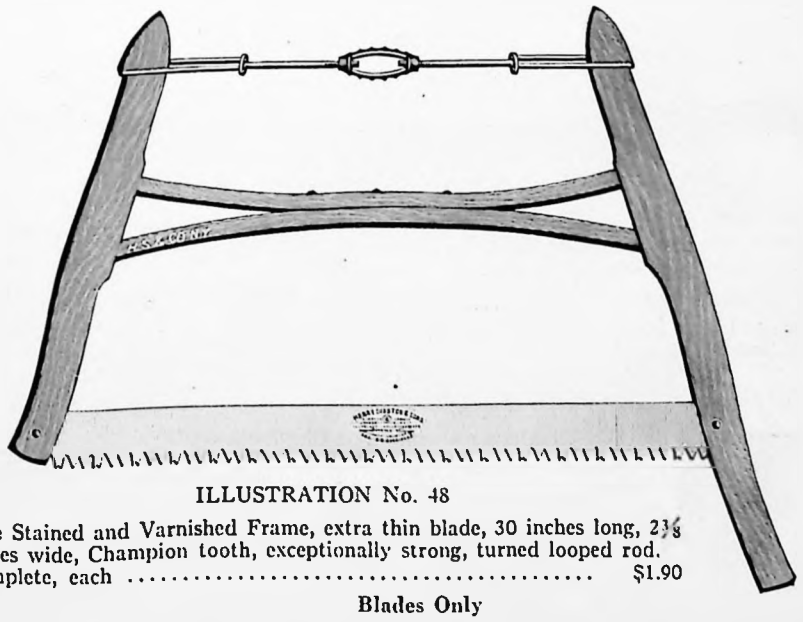


ILLUSTRATION No. 48

Blue Stained and Varnished Frame, extra thin blade, 30 inches long, 2⅜ inches wide, Champion tooth, exceptionally strong, turned looped rod.
Complete, each $1.90

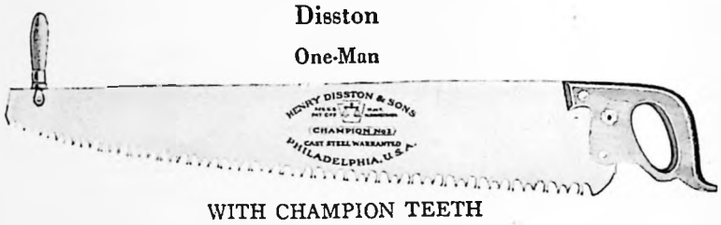
Blades Only

Per dozen $10.80
Each 1.00

Cross Cut Saws

Disston

One-Man



WITH CHAMPION TEETH

With Supplementary Handle. These saws are made, ground and tempered on the same principles as the best hand saws. They will stand all necessary "thrust" pressure without buckling and are rapid, easy cutters.

Length of Blade, feet	3	4
Complete with Handles, each	$2.40	$3.20

Two-Man

ILLUSTRATION No. 2 WITH PLAIN TEETH

These saws are two gauges thinner on the back than on the tooth edge, taper-ground and tempered, set and sharpened ready for use.

Length of Blade, feet	4	4½	5	6
Without Handles, each	$2.70	$3.00	$3.35	$4.00

Two-Man

NARROW BLADE

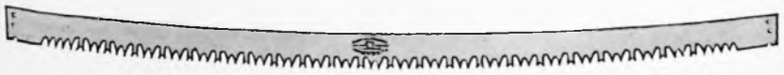


ILLUSTRATION No. 286, WITH TRIUMPH CHAMPION TEETH

This saw is made of best crucible steel, ground and tempered along the same lines as all other Disston saws, but has a narrower blade, 3¼ inches wide, being particularly adapted for felling trees and cutting large diameter timber.

Length of Blade, feet	5	6	7
Thickness or Gauge Steel	15	14	14
Without Handles, each	$2.35	$2.85	$3.30

For One-Man

ILLUSTRATION No. 218

Dozen $3.00
Each ..... .30

Extra Handles

Supplementary

No. 118

5¼ inches long, 1⅝ inches diameter, malleable-iron ferrule, washer, rod and nut fastened inside.

Dozen $2.27
Each ..... .21

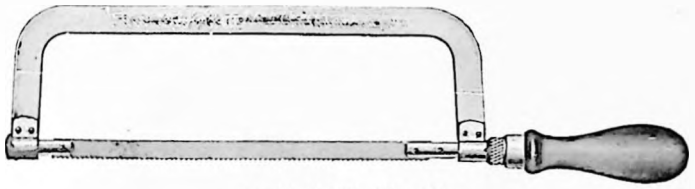
For Two-Man

13½ inches long, 1⅜ inches diameter at thickest part. Grey iron casting, malleable iron bolt and nut.

Pair $0.45

Hack Saw Frames

Rigid



H. S. & CO. No. 100

Steel, nickeled, 2¾ inches between back and tooth edge. Holds 8-inch blades in four different positions. The frame is very stiff and cannot be cramped by straining the blade. **One Blade furnished.**

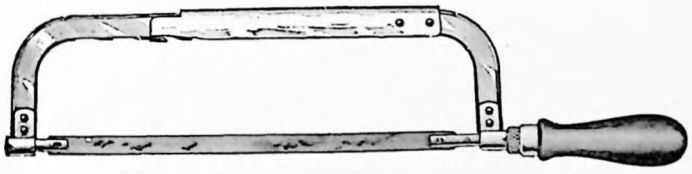
Each $0.68

STARRETT No. 141

Solid steel frame is very stiff, the stock being wider than commonly used, and it cannot be cramped by straining the blade. The saws may be set to cut in any one of four directions and tightened by turning the handle. Polished and nickel-plated. Holds 12-inch blades in four different positions. **One Blade furnished.**

Each $1.00

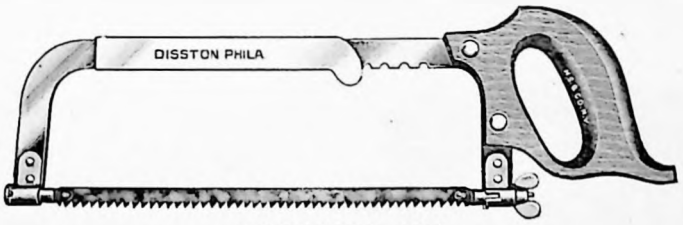
Adjustable



H. S. & CO. No. 200

Steel, nickeled, 2¾ inches between back and tooth edge. Holds 8 to 12-inch blades in four different positions. The frame is wider and stiffer than usually used, and has our improved adjustable back. **One Blade furnished.**

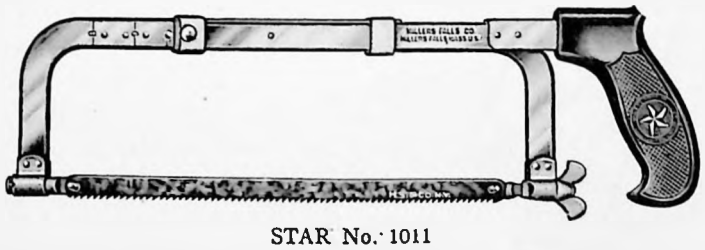
Each $0.90



DISSTON No. 36½

Closed hardwood handle, steel frame, nickel-plated, adjustable by half inches to take in blades 8 to 12 inches. Riveted sockets. Reversible stretchers, will not fall out while readjusting.

Frame only, each..... $1.70



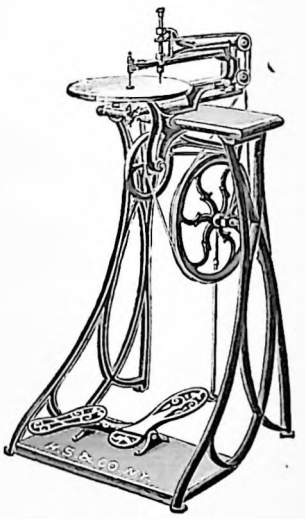
STAR No. 1011

Pistol-grip handle, black composition. Polished and nickeled steel frame. Adjustable for blades 8 to 12 inches, with scale for the different lengths on back of frame. Depth under back 3½ inches. Perfect fitting handle secured to frame by a steel rib extending nearly the full length of handle.

With 10-inch blade in each frame, each..... $2.00

Scroll Saws

Dexter



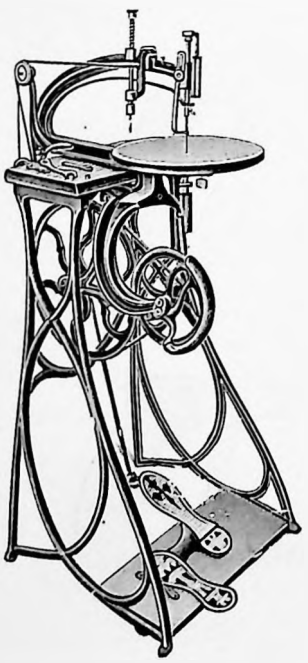
Swings 16 inches. Belt Gear. Tilting Table. For Foot Power only.

Similar in construction to Fleetwood, but somewhat lighter in construction and has wooden arm.

Each

Style "C" Saw complete, with boring attachment and blower mounted on stand.....$27.30
Saw complete, without boring attachment.... 24.15

Fleetwood



This machine is not a toy, but is built along mechanical lines and is a first-class practical Scroll Saw, intended for the finest work.

Is very light and easy running and does accurate and clean-cut work.

Has a 15¾-inch swing, a tilting table and has drilling and blowing attachments.

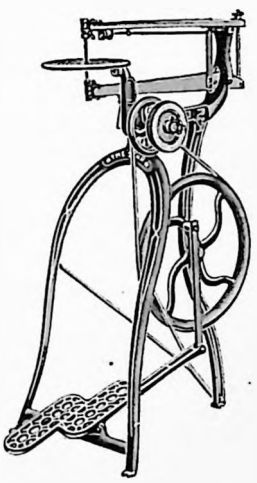
The stand is plain, nicely japanned and finished. Belt Gear, Metal Arm, either foot or power.

Each

No. 3 Complete, with blower, boring attachment and treadle mounted on plain stand, as illustrated $44.00

Scroll Saws

The Star Fret Saw



A well-balanced, steady machine.
Iron castings, japanned black and ornamental with red stripes; steel arbors.
Heavy Drive Wheel, giving power.
Arms hung in the middle of their supporting casting to give free and easy motion; adjustable, so may be kept parallel.
Two balance wheels, one each of iron and emery, adding steadiness to the motion.
Adjustable Clamps for the emery wheel, capable of embracing other sizes of emery and buffing wheels, grindstone, etc.
Nickeled Tilting Saw Table.
Automatic Dust Blower.
Lever Saw Clamps and Adjustable Saw Guide.
Depth of arms, 18 inches.
Whole height of machine, 37 inches.
Weight, boxed, 60 pounds; net, 40 pounds.

Each $15.00
Extra for setting up and crating 2.00

Knocked down and packed one in a wooden box.

The New Rogers Fret Saw

Construction similar to above, but lighter.
Iron castings, japanned black, with red and gilt stripes; steel arbors; arms and pitman of best selected ash wood.
Bearing of the arms carefully adjusted.
Automatic Dust Blower.
Jointed Stretcher Rod, permitting free action of arms.
Adjustable Lever Saw Clamps, with Hinged Jaw, to overcome a disagreeable raking overthrow of the saw blades and to prevent breakage of blades.
Drilling Attachment on the right-hand side of balance wheel.
Parts secured to each other by nicely fitting screws and bolts.
Each machine is set up and run and carefully inspected before leaving our works.
Also furnished with each machine: 12 Saw Blades, 1 Wrench, 3 Sheets of Designs, 1 Awl, Impression Paper, and 3 Drill Points.
Height, 35 inches.
Weight, boxed, 45 pounds; net, 28 pounds.

No. 2 With nickeled tilting table and emery balance wheel, each $11.50
Extra for setting up and crating 2.00

Knocked down and packed one in a wooden box.

Fret Saw Table

Pierce

For Manual Training Work

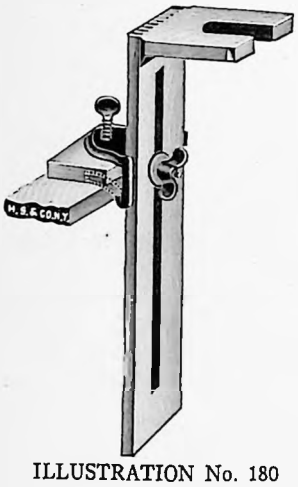


ILLUSTRATION No. 180

No. 180

This Table is particularly commendable for two features: First, it is adjustable to any height above desk from 3 to 20 inches, permitting the student to work in a sitting or standing position; second, it can be instantly attached to any school desk.

It is designed to meet the popular demand for a saw table, low in price, quick and easy of adjustment, and simple enough in construction to enable the younger students to attach or detach it without difficulty.

It most admirably combines these features and is recommended where an inexpensive but thoroughly practicable saw table is wanted.

Per dozen $24.00
Each 2.25

Fret or Scroll Saw Wood

(In Sheets)

24 inches long, 16 inches wide, $\frac{3}{16}$-inch thick. Fine clear stock.

Bass (single ply), per dozen $2.50
Each ..... .23
Hazel (three ply), per dozen 4.10
Each ..... .34

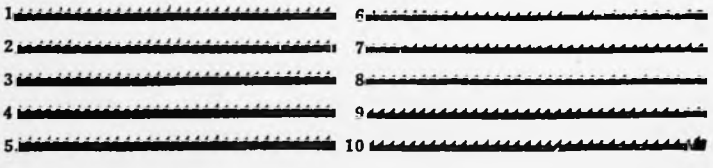
Fret or Scroll Saw Designs

(In Book Form)

Large size, each $0.95
Small size, each ..... .35

Saw Blades

Fret or Bracket, for Wood

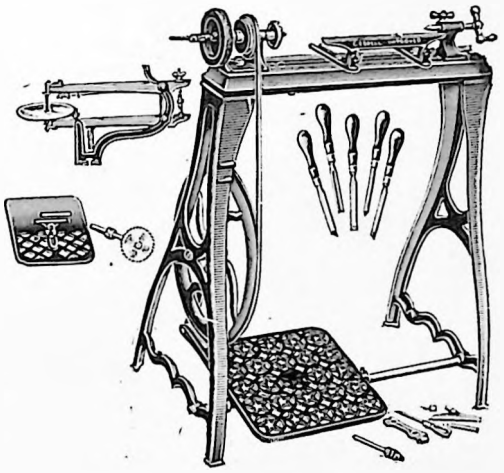


Star

Nos.	000 to 0	1 to 3	4 to 6	8
5 inches, per gross	$1.25	$1.35	$1.40	$1.50
5 inches, per dozen	.12	.14	.14	.15

Lathe and Saw Attachments

Goodell



Drive wheel and cone-pulley with two grooves to permit change of speed.

Accurate drill chuck holding from 0 to ¼ inch in diameter round shank drills for boring in metal or wood.

Long and short tool rests.

Five turning tools, wrench and drill points, etc.

Lathe head with 2-inch face plate and spur center and screw center for turning cups.

Emery wheel, 4½ x ⅞ inches.

Drill spindle with chuck for drill points for wood boring.

Tail stock with screw feed clamped at any point.

Swing of lathe, 5 inches; distance between centers, 13½ inches; distance of bed from floor, 27 inches; length of bed, 24 inches.

Fret sawing attachment, quickly attachable or detachable, with nickeled table, ash wood arms, dust blower, adjustable saw guide and lever, saw blades, designs, etc.

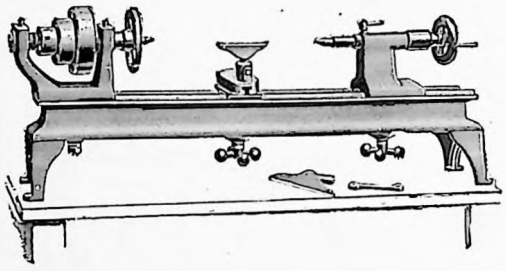
Circular saw attachment, with saw table 6 x 7 inches, saw arbor, saw blade 3 inches in diameter, and straight-edge guide.

The whole machine is thoroughly built and highly finished, polished parts being nickeled.

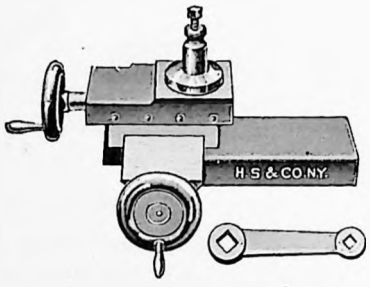
	Weight, Boxed, Pounds	Weight, Net, Pounds	Each
Lathe and Lathe Tools	71	50	$20.70
Scroll Saw Attachment	16	7	4.30
Circular Saw Attachment	..	3	1.35

Knocked down and packed 1 machine in a wooden box.
In ordering state whether either or both of the saw attachments are wanted.

Light Bench Speed Lathe



8-INCH x 3-FOOT BENCH SPEED LATHE



8-INCH SLIDE REST

For the tool room or general machine shop use this lathe will be found very acceptable, being strong and accurate, with centers lining perfectly. The cone is turned inside as well as outside, and is for 1¼-inch belt. There is a ½-inch hole through spindle, and this as well as the tail spindle is of steel; the latter has a self-discharging center.
Swing, 8 inches. Length of bed, 3 feet. Between centers, 20 inches. Net weight, 73 pounds. Weight for shipment, 115 pounds.
Complete $60.00

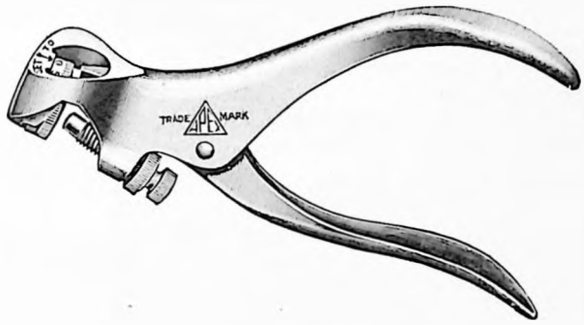
Attachments for 8-Inch x 3-Foot Speed Lathes

	Each
Cup Center	$1.25
Spur Center	3.00
Screw Chuck	2.25

Slide Rest

An exceedingly well-made tool, adapted to 8-inch swing, hand or foot lathe. The longitudinal motion is 5 inches, and the transverse motion 2¾ inches.
Each $22.00
Weight, boxed, 10 pounds.

Saw Sets



Genuine Morrill

Special

Length, 6⅛ inches.

For Hand Saws from the widest made down to ½ inch and not over 16 gauge.

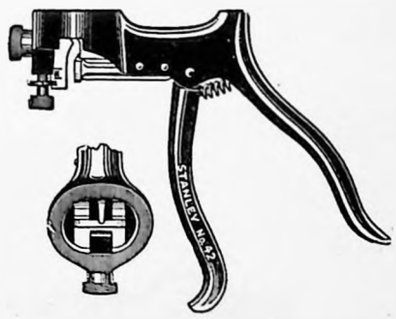
Note—16 gauge is .0625 inches.

Made of polished semi and tool steel. The anvil is set on an angle, which enables the plunger to be made stronger and more evenly tempered, thus preventing chipping at end. The gauge screw is provided with lock-nut, which prevents it from working loose while in use.

Each $1.80

Stanley "Pistol Grip"

Adjustable



This saw set embodies several unique and important features not heretofore seen in tools of this description.

The shape of the body and handle enables the user to operate the tool with great ease and with the least possible exertion, and the saw is held firmly against the gauge while the tooth is being set.

It can be readily adjusted by means of the knurled thumb screw to give a greater or less set to the teeth of the saw, according as the saw is to be used for coarse or fine work. As the anvil or part against which the plunger works is graduated, the same adjustment can be easily obtained for duplicate work.

The tool is so designed that the saw teeth are in plain view, which enables the user to quickly adjust the tool to the tooth to be set.

The plunger and anvil are made of tool steel—hardened and tempered. All parts are carefully machined and are interchangeable.

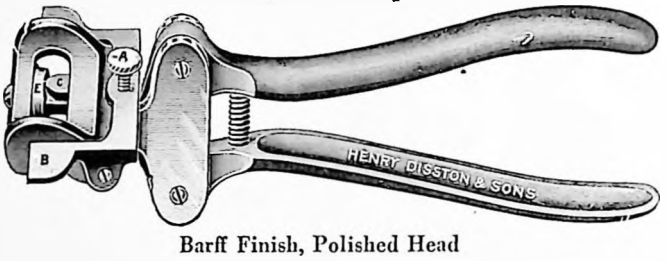
The tool is given a fine black finish.

No. 42 ..... Each, $1.80

Packed one in a box.

Saw Sets

Disston Triumph

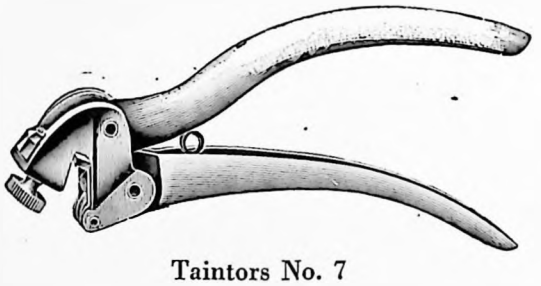


Barff Finish, Polished Head

The principal feature of this set is the use of two plungers operated by two levers or handles; pressure on lower lever forcing plunger "D" against body of saw, holding it rigid while a continuation of pressure on upper lever operate plunger "C" in setting the tooth. Gauge "B" is for regulating the depth of set. The anvil "E" is fitted with four beveled surfaces, suitable for different sizes of teeth.

No. 28 7½ inches overall. For hand saws, back saws, web saws, narrow band saws, etc., 10 points to the inch and coarser. Each.....$1.30

No. 280 7½ inches overall. For hand saws, back saws, web saws, butcher saw blades, etc., from 10 to 16 points. Each..... 1.30



Taintors No. 7

This Saw Set consists of a frame to which are attached two movable handles, an anvil and punch. A spring opens the handles. It is self-adjusting, excepting turning of anvil to change setting.
The faces of the steel anvil are numbered so that any setting may be repeated.

Each $1.30

Taintors No. 7½

Same as No. 7, with following additions: A double plunger, one side for fine, the other for coarse teeth. Hardened ears which glide easily over the teeth. A screw instead of pin for changing the plunger.

Each $1.55

Morrill Pattern

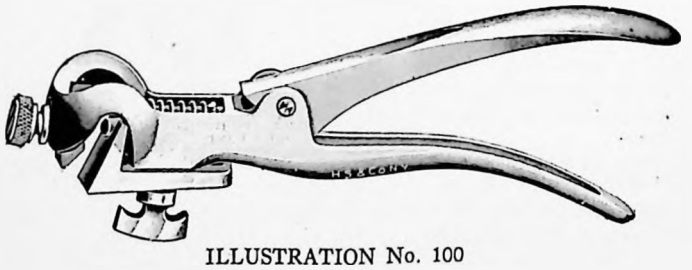


ILLUSTRATION No. 100

For hand, band and jig saws, from the widest made down to ½ inch.
Hardened anvil and plunger, tempered steel springs.

Polished, each $0.75

Mitre Boxes

Stanley

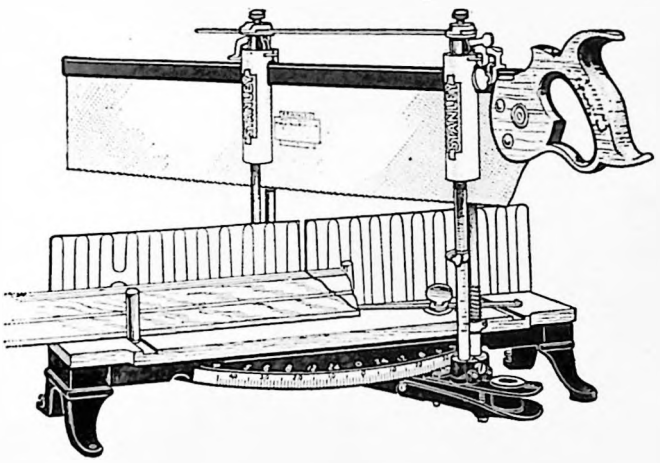


ILLUSTRATION No. 358

These Boxes are compact, strong and durable and are quickly put together or taken apart for convenience in carrying.

The entire frame is one solid casting, insuring great strength.

The saw-guide uprights are securely clamped in tapered sockets in the swivel arm and can be adjusted to hold the saw without play, and also to counteract a saw that runs out of true, due to improper setting or filing. This is a new feature that will be appreciated.

The second socket in the swivel arm permits the use of a short saw or allows a much longer stroke with a standard or regular saw.

The swivel arm is provided with a tapered index pin which engages in holes placed on the under side of the base. These holes are made at the commonly used angles as designated on top of the base, allowing 3, 4, 5, 6, 8, 12 and 24-sided pieces to be cut. The edge of the base is graduated in degrees and the swivel arm can be set and automatically fastened at any degree desired. This automatic fastening device holds the swivel arm firmly to the base in all positions.

The uprights, front and back, are graduated in sixteenths of an inch, and movable stops can be set, by means of thumb-screws, to the depth of the cut desired.

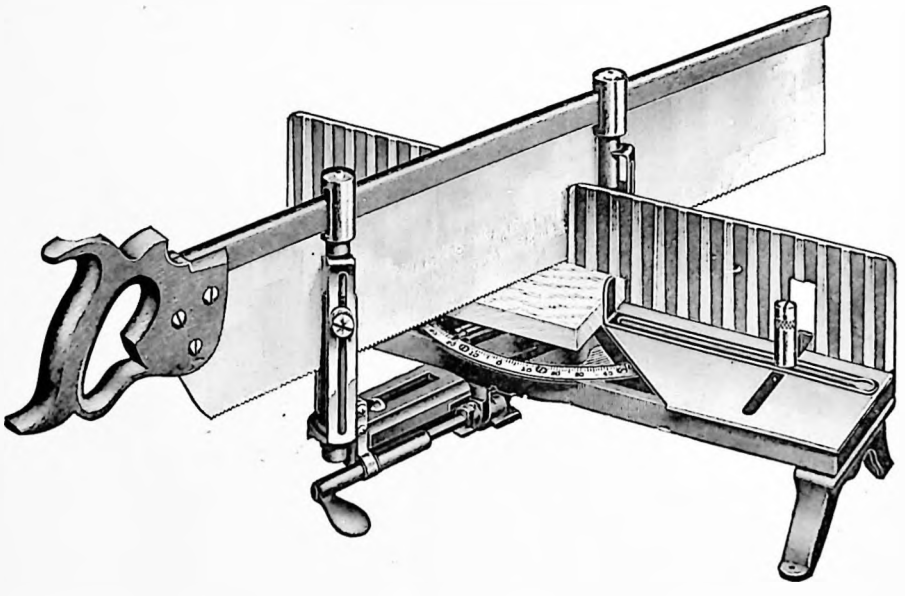
Stock guides hold all kinds of ordinary work, as well as irregular forms, and can be used as length gauges for duplicating short pieces.

Automatic catches on the uprights hold the saw up, which allows the use of both hands in placing the work. The adjustable stop on top of the saw, coming in contact with the lever trip, releases the front catch, and the saw in falling pitches slightly forward, automatically releasing the rear catch, without any necessity of taking the hand from the saw or touching the lever trip. Two cone-pointed levelling-screws on the rear feet prevent the box sliding when in use. These boxes are regularly packed with back saws made expressly for this purpose by Henry Disston & Sons, Inc.

Nos.	Saw, Inches	Capacity Right Angle, Inches	Capacity Mitre (45°), Inches	Capacity at 30° without Stock Guide, Inches	Weight with Saw, Lb.	With Saw, Each
240	20 x 4	8¼	5½	3½	28	$14.80
242	22 x 4	8¼	5½	3½	28¼	15.15
244	24 x 4	8¼	5½	3½	28½	15.55
246	26 x 4	8¼	5½	3½	30	15.90
346	26 x 4	9½	6½	4⅛	34	17.25
358	28 x 5	9½	6½	4⅛	36	18.20
460	30 x 6	11	7½	5⅛	51	21.80

Mitre Boxes

Langdon Acme Improved



Iron and steel castings, the main castings with bronze finish; bright parts nickeled. Extra long saw guides to give stability when the saw is raised to its highest point.

A simple and effective device automatically catches the saw guides and holds them suspended when they are raised to their highest point and releases them instantly when desired.

Notches in the bed-plate to determine the positive angles most in use.

By the use of a thumb-lever at the front of the box the saw supports may be swung freely and locked at either a positive or an intermediate angle.

Guides to support the work against the back or to be used when angles more acute than 45 degrees are desired. These may be slid out of the way through little gateways in the back when not wanted.

An extension lever with a quick-acting adjustment. (Size 1 box does not have an extension lever.) A length gauge for duplicating lengths.

Steel bottom boards roughened to prevent the work from slipping.

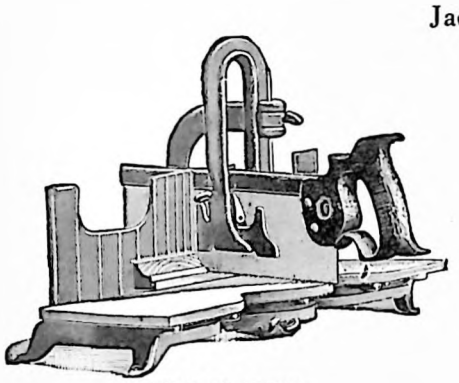
A graduated arc upon the bed and an index plate to tell at what degrees to set the saw for certain desired cuts.

Depth gauge and take-up in case of wear upon the saw.

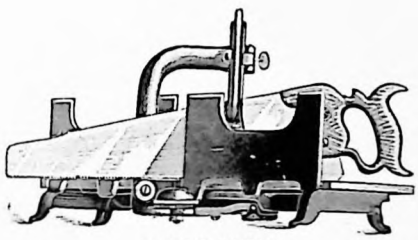
Nos.	Size	Dimension of Saw, Inches	Capacity at Right Angles, Inches	Capacity at Mitre, Inches	Weight, Boxed, Lb.	Weight, Net, Lb.	Each
68	1	22 x 4	7½	5	34	23	$14.65
69	1	24 x 4	7½	5	35	23½	15.25
70	1	26 x 4	7½	5	36	24	15.85
71	2	22 x 4	10¼	7	34	23	15.85
72	2	24 x 4	10¼	7	35	23½	16.40
73	2	26 x 4	10¼	7	36	24	16.70
74	2½	28 x 5	10¼	7	37	25	18.85
75	2½	30 x 5	10¼	7	38	25½	20.00

Mitre Boxes

Jacob



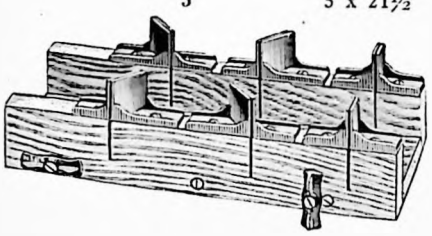
FRONT VIEW



BACK VIEW

Any saw can be used in these boxes and any width of material may be sawed with precision, as guides are close to work. Quickly set for any required angle or for undercuts.

Size, Inches	Size of Bed, Inches	Takes Work Height, Inches	Each
4	4¼ x 16	4	$5.00
5	5 x 21½	5	6.00

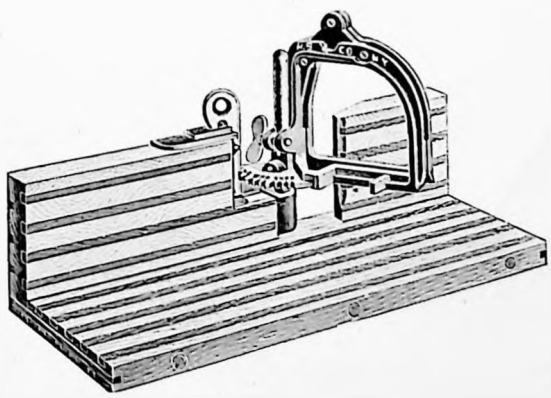


Olmstead Improved

The Frame is made of 1-inch selected hardwood, having 6 fixed irons and 6 movable ones. Adjustable to any thickness of saw.

		Each
No. 3	For moulding, 1½ x 3 inches	$2.35
No. 4	For moulding, 2½ x 4 inches	3.40

Perfection



The Saw Guide can be instantly set and rigidly held at any angle by use of the set screw. Any saw may be used, but for cutting to exact depths a back saw is necessary, the back rib resting on the shoulders in swinging guide. Has friction stop. The guide can be detached from the wood box and folded to carry in a tool chest.

Complete, as shown, Each.....$3.20

Picture Frame Mitre

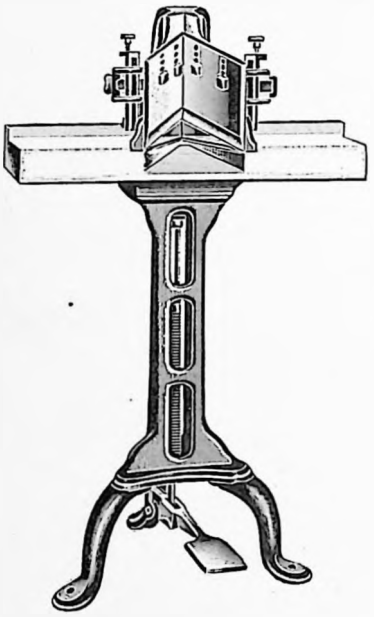
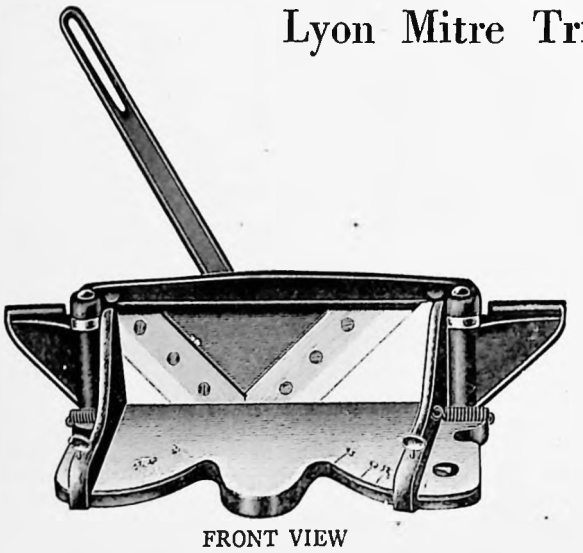


ILLUSTRATION No. 3

This machine is especially constructed for cutting rabbeted moulding. Its main features are speed, simple operation and accuracy, always cutting a true mitre. When used on gilt mouldings the gilding is not broken, but left smooth as if finished with a plane. Cuts up to 3 inches.

No. 3 Each $81.55

Lyon Mitre Trimmer



FRONT VIEW

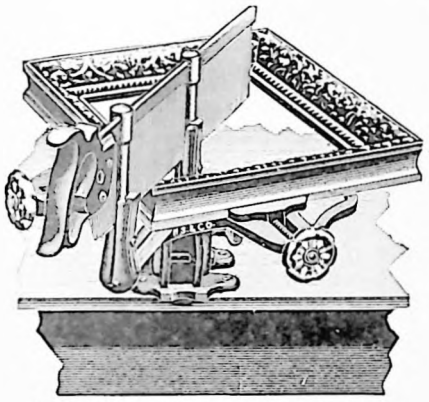
No. 4

An excellent little machine for pattern makers, cabinet makers, carpenters, etc. Made especially for use on each bench.

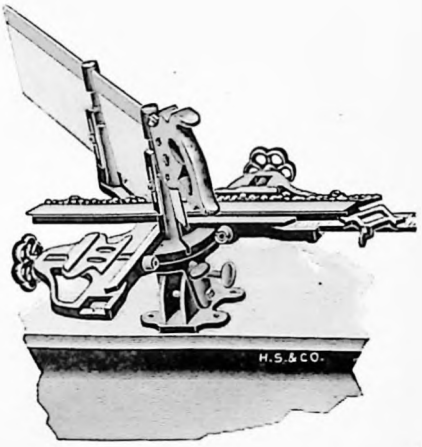
Cuts 8 inches wide, 4 inches high. Size of table, 17 x 8 inches. Weight about 30 lbs. Each $25.50

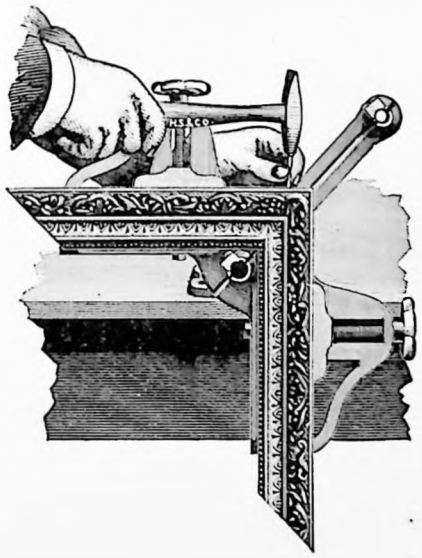
Mitre Machine and Vise

Marsh



POSITION IN RE-SAWING LAST MITRE, WHEN NECESSARY



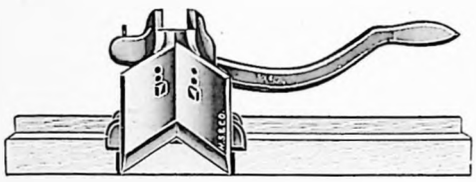


POSITION FOR BORING AND NAILING

With this machine the sides and ends of a frame can be measured and cut from one side as well as the other, thus admitting of the machine being placed in any position at either side or end of the bench. It will cut the moulding equally well from the back or outside or from the front or inside. It can be instantly and securely adjusted toward the right or left while either in a horizontal or perpendicular position. The bed plate is 3½ inches above the bench and measures 15 x 15 inches. It will cut any moulding up to 5 inches in width, and will join any frame not smaller than 7½ x 7½ inches.
It weighs 20 pounds.

		Each
No. 100	With 4½ x 26-inch saw	$17.65
No. 101	Without saw	13.85

Hand Mitres

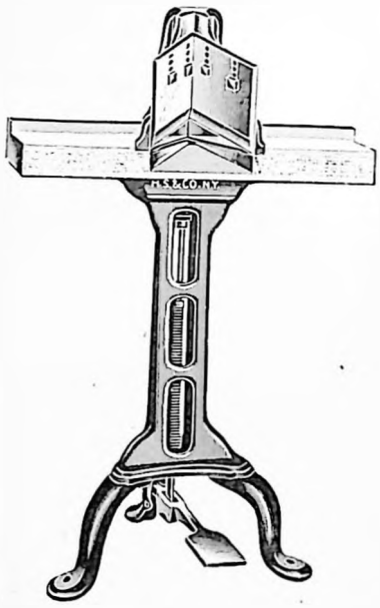


For cutting mitres rapidly and accurately. The knives are at right angles and so arranged that by one motion the moulding is cut in two and both angles of the mitre made.

Each

No. 00 Cutting up to 2¼ inches.....$36.30

Foot Mitres



This is the same style machine as shown above, except on stand for foot power. The illustration is on a smaller scale.

Provided with two knives, set at right angles, and so arranged that by one motion of the treadle the moulding is cut in two and both angles of the mitre made.

It is very rapid and positively accurate.

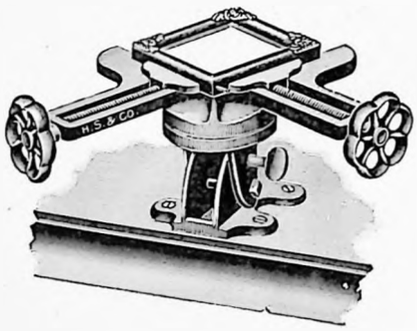
Each

No. 2 To cut up to 3 inches $68.10

No. 3 To cut up to 4 inches 78.60

Picture Frame Vise

Marsh



With this vise any frame can be held in proper position for nailing perfectly and with greatest ease. It has the same base with swivel attachment as the Marsh Mitre Machine, allowing the frame to be swung or tipped in any position. Holds frames from 3½ x 3½ inches up, and takes any width of moulding up to 4 inches wide.

No. 400 Each.....$7.20

Planes

Bailey Wood

ILLUSTRATION No. 24

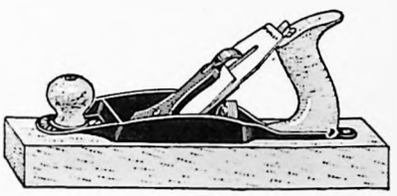


ILLUSTRATION No. 27½

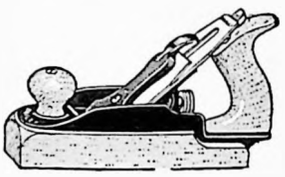


ILLUSTRATION Nos. 35-36

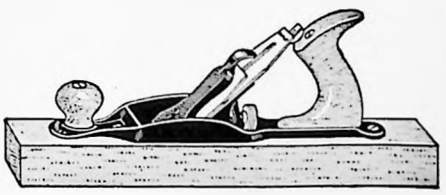


ILLUSTRATION Nos. 28-32

Adjustable

Every Carpenter needs two or more wood planes in his kit for rough outside work. Bailey Wood Planes supply the demand for a wood plane of superior quality. The bottom, handle and knob are made from selected and well-seasoned beech. The cutters are the regular Bailey type and are adjustable both endwise and sidewise.

The frog is held in place by two machine screws which pass through the top iron and screw into two brass lugs. These lugs are screwed and securely pinned into the wood bottom. This is far superior to other methods of fastening, as it holds together firmly the wood bottom, the top iron which strengthens the wood bottom and the frog.

Nos.	Kind	Length, Inches	Cutter, Inches	Weight, Pounds	Each
22	Smooth	8	1¾	2½	$2.40
24	Smooth	8	2	2⅞	2.50
35	Handle Smooth	9	2	3¼	2.95
36	Handle Smooth	10	2⅜	4	3.35
26	Jack	15	2	3¾	2.60
27½	Jack	15	2¼	4¾	3.00
28	Fore	18	2⅜	5½	3.30
31	Jointer	24	2⅜	6½	3.55
32	Jointer	26	2⅝	7⅝	3.80

Nos. 22, 24, 35 and 36 packed one in Box; other Nos. one in Paper Package.

Planes

Stanley Non-Adjustable Block

ILLUSTRATION No. 110

No. 110 is the most popular of all the non-adjustable block planes. Both the bottoms and sides are ground, and in place of the boss cast on the front for a finger rest, it has an apple-wood knob, stained black.

No.	Length, Inches	Cutter, Inches	Finish	Package	Pounds	Each
110	7½	1⅝	Japan	1 only	1⅛	$0.90

Bailey Adjustable Block

ILLUSTRATION No. 9½

ILLUSTRATION Nos. 18 AND 19-65

ILLUSTRATION No. 15

Bailey Block Planes are the highest type of Block Planes manufactured. All numbers have the most improved form of adjustment, which enables the user to accurately adjust the cutter either endwise or sidewise. The cutter rests on its seat at an angle of 20 degrees as against 45 degrees in the ordinary Bench Plane, and the cutter bevel is made on the upper instead of on the lower side. All have adjustable throats which permit of the opening or closing of the mouth as coarse or fine work may require. To close the throat, loosen the thumb screw on the front of the plane, move eccentric plate to right as far as desired, then tighten screw. To open throat move plate to left. The thumb screw also acts as a finger rest while using the plane.

Nos. 18 and 19 are distinctive in the method of fastening the cutter. The knuckle joint in the cap makes it also a lever, and placing the cap in position clamps the cutter securely to its seat.

No.	Length, Inches	Cutter, Inches	Finish	Weight, Lbs.	Each
9½	6	1⅝	Japan	1½	$1.60
15	7	1⅝	Japan	1⅝	1.70
18	6	1⅝	Nickel (Knuckle Joint)	1½	2.10
19	7	1⅝	Nickel (Knuckle Joint)	1⅝	2.25
65	7	1⅝	Nickel (Low Angle)	1⅜	2.20

Planes

Stanley Bull-Nose Rabbet

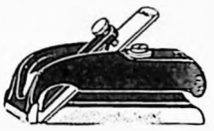


ILLUSTRATION No. 75

Will be found very useful for working close up into corners or other difficult places. The mouth can be adjusted for different widths by means of the set screw on top of the plane.

No. 75 4 inches long, 1-inch cutter, Japan trimmings, weight 5/8 pounds. Packed one in box.
Each $0.52

Stanley Rabbet and Block

ILLUSTRATION No. 140

A detachable side will easily change it from a block plane to a rabbet plane, and vice-versa, a combination that will be appreciated by many. The cutter is adjustable endwise and set on a skew. It has a rosewood knob.

No. 140 7 inches long, 1¾-inch cutter, Japan trimmings, weight 1⅛ pounds. Packed one in box.
Each $2.35

Stanley Carriage-Makers' Rabbet

ILLUSTRATION Nos. 10-10½

ILLUSTRATION No. 10¼

Especially adapted for the heavy framing required in mining work, for carriage or wagon building, or in any work of similar nature.
They have a cutter of double type and are adjustable both endwise and sidewise.
No. 10¼ has all the features of Nos. 10 and 10½, and in addition both the handle and knob can be tilted to either side. This permits working close up to perpendicular sides of any height without hurting the hands of the user. It is fitted with spurs on both sides, so that it will rabbet across the grain equally as well as with it.
All have rosewood handles and knobs.

No. 10½ 9 inches long, 2⅛-inch cutter, weight 3 pounds. Each..... $3.75
No. 10 13 inches long, 2⅛-inch cutter, weight 4¼ pounds. Each..... 4.50
No. 10¼ 13 inches long, 2⅛-inch cutter, weight 4¼ pounds. Each..... 5.35
Packed one in box.

Adjustable Iron Planes

Bailey

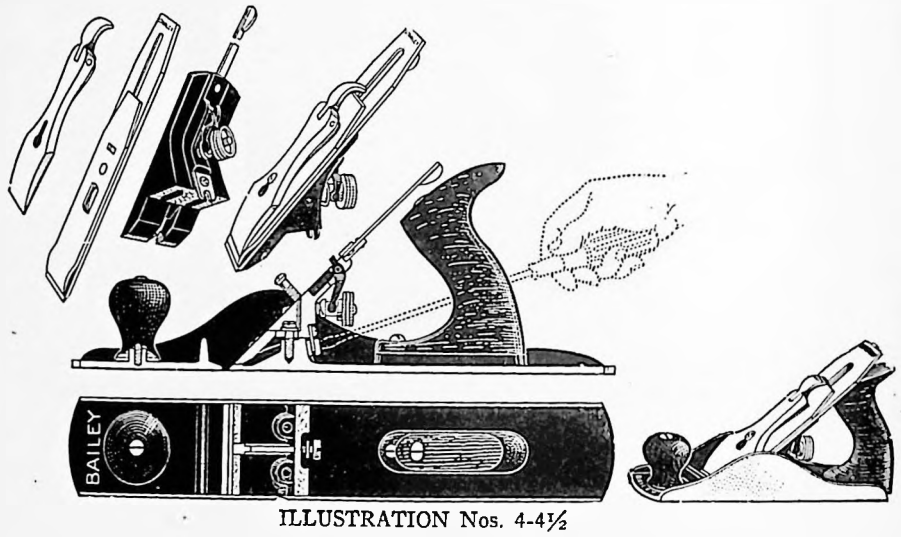


ILLUSTRATION Nos. 4-4½

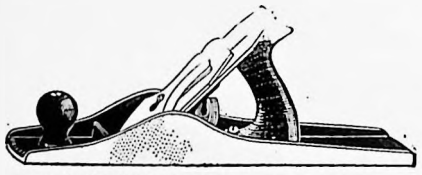


ILLUSTRATION Nos. 5-6

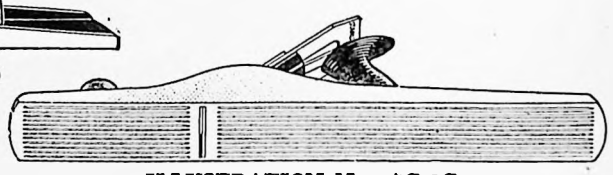


ILLUSTRATION Nos. 7C-8C

The Planes described, generally known as Bench Planes, are divided into four classes, namely: Smooth, Jack, Fore and Jointer.
A smooth Plane is for finishing or smoothing off flat surfaces. Where the uneven spots are of slight area, its short length will permit it to locate these irregularities, leaving the work with a smooth surface when finished.
A Jack Plane is used to true up the edges of a board in the rough and prepare it for the Fore or Jointer.
A Fore Plane is simply a short Jointer, and being lighter, is preferred by some workmen to the longer plane.
A Jointer is a finishing Plane for large surfaces and is invariably used to true up the edges of boards so that they can be closely fitted or joined together.
"Bailey" Iron Planes have been in use for nearly fifty years and are the recognized standard for planes of this type. While retaining all the original features, many valuable improvements in construction have been added from time to time. Only the finest materials and the best workmanship are used in their manufacture.

Nos.	Each	Nos.	Each	Kind	Length, Inches	Cutter, Inches	Weight, Lbs.
1	$2.10			Smooth	5½	1¼	1¼
2	2.70			Smooth	7	1⅝	2¼
3	2.80	3 C	$2.95	Smooth	8	1¾	3⅛
4	3.10	4 C	3.25	Smooth	9	2	3¾
4½	3.55	4½C	3.70	Smooth	10	2⅜	4¾
5	3.55	5 C	3.70	Jack	14	2	4¾
5¼	3.15			Jack "Junior"	11½	1¾	3⅝
5½	4.00	5½C	4.20	Jack	15	2¼	6¾
6	4.55	6 C	4.75	Fore	18	2⅜	7¾
7	5.20	7 C	5.45	Jointer	22	2⅜	8⅛
8	6.20	8 C	6.50	Jointer	24	2⅝	9¾

Above prices are subject to change without notice

Stanley Bed Rock Planes

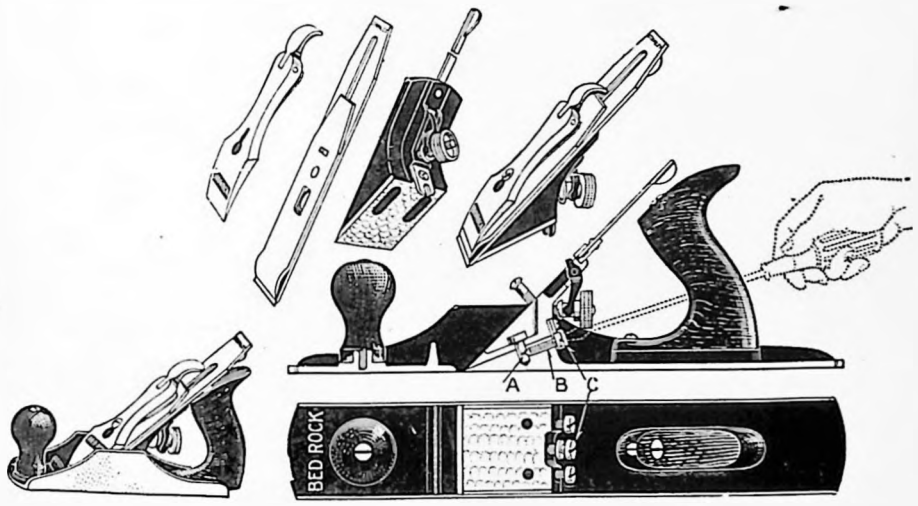


ILLUSTRATION Nos. 602-603

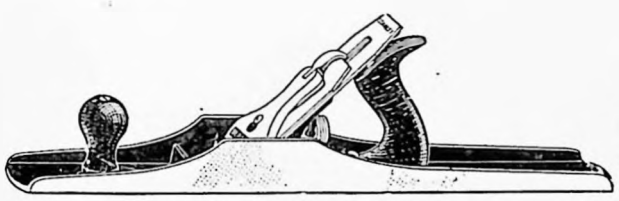


ILLUSTRATION Nos. 605-608

ILLUSTRATION Nos. 604-604½

This Plane, owing to its solidity and variety o fadjustments, surpasses all others for fine work on all woods. The cutter, frog and bottom are so designed, machined and fitted that they are practically one solid piece of metal, thus preventing any chance of vibration.

Particular attention is called to the shape of the sides. This new and distinctive feature adds greatly to the strength of the plane as well as affording large bearing surfaces when the plane is used on its sides.

The frog may now be adjusted either forward or backward without removing the lever and cutter; simply slacken the tension of the two frog-clamping screws "B," and with a screwdriver adjust the frog as desired by means of the frog-adjusting screw "C" in the center, and then tighten the frog-clamping screws. (See cut.)

The frog is held to its seat by means of two pins "A" of large diameter; each of these has a tapered hole near the lower end. The two-frog clamping screws "B" have tapered points. These points fit in the holes in the pins "A." The center of the tapered hole in these pins is slightly above the center line of the frog-clamping screws, so that when these screws are driven in, they produce the effect of a wedge, drawing the pins downward and clamping the frog absolutely rigid in its place.

The cutter is the regular "Bailey" cutter and is adjustable both endwise and sidewise.

The handle and knob are of well-seasoned rosewood.

Planes with bottoms either flat or corrugated will be furnished as desired.

The number with a "C" designates Corrugated Bottom. .

Nos.	Each	Nos.	Each	Kind	Length, Inches	Cutter, Inches	Weight, Lbs.
602	$2 00			Smooth	7	1⅝	2¼
603	3.10	603 C	$3.25	Smooth	8	1¾	3¼
604	3.25	604 C	3.55	Smooth	9	2	3⅝
604½	3.85			Smooth	10	2⅜	4¾
605	3.90	605 C	4.10	Jack	14	2	4½
605½	4.35	605½C	4.60	Jack	15	2⅜	6½
606	5.00	606 C	5.25	Fore	18	2⅜	7⅜
607	5.70	607 C	6.00	Jointer	22	2⅜	8¾
608	6.80	608 C	7.15	Jointer	24	2⅝	9¾

Above prices are subject to change without notice

Planes

Stanley

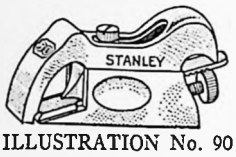


ILLUSTRATION No. 90

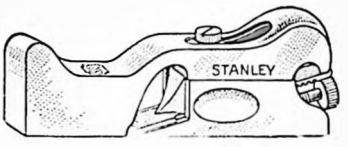


ILLUSTRATION Nos. 92-94

Cabinet Makers' Rabbet

For fine cabinet or other work where extreme accuracy is required. The sides and bottom being square with each other the planes will lie perfectly flat on either side, and can be worked either right or left hand. They have adjustable throats; this means that the width of the throat opening or mouth can be widened or narrowed as coarse or fine work may require. They also are fitted with the side groove or "Hand-y" grip feature. The cutters are adjustable endwise.
Plane No. 90 is of the Bull-Nose pattern, so that it can be used close up into corners or other difficult places.

Nos.	Length, Inches	Cutter, Inches	Finish	Weight, Lbs.	Each
90	4	1	Nickel-plated	1	$2.80
92	5½	¾	Nickel-plated	1½	2.80
93	6½	1	Nickel-plated	1¾	3.35
94	7½	1¼	Nickel-plated	2	3.85

Swinging Fence Match

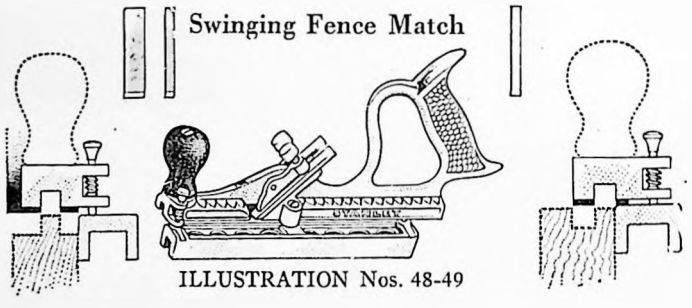


ILLUSTRATION Nos. 48-49

This form has two plow cutters of the same width and one extra wide cutter. The fence in one setting exposes two cutters for cutting the tongue and, when reversed, leaves only one exposed for cutting the groove. On thicker boards than the plane works on center, the extra wide cutter is substituted for groove cutter when cutting tongue. Nickel-plated. Rosewood knobs.

Nos.	Size of Groove, Inch	Size of Boards Inches	Centers on, Inch	Weight, Lbs.	Each
48	1/16	¾ to 1¼	⅞	3¾	$3.75
49	1/16	½ to ¾	½	2⅜	3.75

Packed one in box

Iron Dado

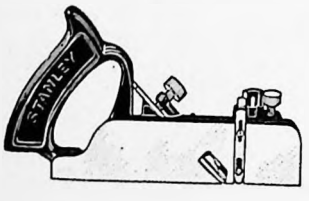
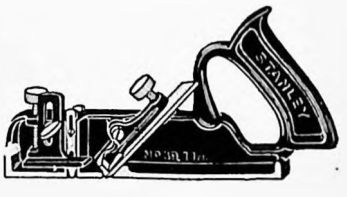


ILLUSTRATION No. 39



The great advantage of these Dado Planes over those made of wood is that they will keep true under all conditions, even in the narrowest widths. They have skew cutters, an adjustable depth gauge, and two adjustable spurs, one on each side of the plane. This adjustable feature permits of the spurs being adjusted to take up wear as well as for the depth of the cut.
The plane is made in six sizes, from ¼ inch to 1 inch in width. In ordering always give the number (39) and width of cutter desired.

Nos.	Length, Inches	Cutter, Inches	Finish	Weight, Lbs.	Each
39	8	¼	Japanned	1¾	$2.05
39	8	½	Japanned	1¾	2.20
39	8	¾	Japanned	1¾	2.30
39	8	⅞	Japanned	2	2.55
39	8	7/8	Japanned	2⅛	2.65
39	8	1	Japanned	2¼	2.75

Packed one in box

Planes

Stanley

Duplex Filletster and Rabbet

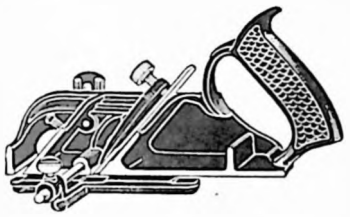


ILLUSTRATION No. 78

This Plane has two seats for the cutter, one for regular work and the other where a bull-nose is required. It has a spur and a removable depth gauge. The adjustable fence can be used on either side and slides under the bottom, regulating the width of the cut. To work same as a rabbet plane, remove fence and arms.
No. 78, 8½ inches long, 1¼-inch cutter. Japanned. Weight 3 pounds. Packed one in box. Each..$2.30

Skew Cutter Filletster and Rabbet

ILLUSTRATION No. 289

This Plane has an extra wide skew cutter. An adjustable spur is fitted to each side. The fence and depth gauge can be attached to either side; the Plane is, therefore, suitable for right or left-hand work. The adjustable fence slides under the bottom, regulating the width of the cut. Remove arms and fence and a Skew-Cutter Rabbet Plane is obtained.
No. 289. 8½ inches long, 1¾-inch cutter. Japanned. Weight, 3¾ pounds. Packed one in box.
Each $2.70

Handled Iron Rabbet

ILLUSTRATION Nos. 190 TO 192

These Planes will lie perfectly flat on either side and can be used equally as well with right or left hand while planing into corners or up against perpendicular surfaces.
Made in two styles, one fitted with a spur which permits them to be used for working across the grain, and the other without a spur. Both styles are fitted with a detachable depth gauge.

Nos.	Length, Inches	Cutter, Inches	Finish	Weight, Lbs.	Each
190	8	1½	Japanned, with spur	2½	$2.10
191	8	1¼	Japanned, with spur	2¼	1.95
192	8	1	Japanned, with spur	2	1.80

Edge Trimming

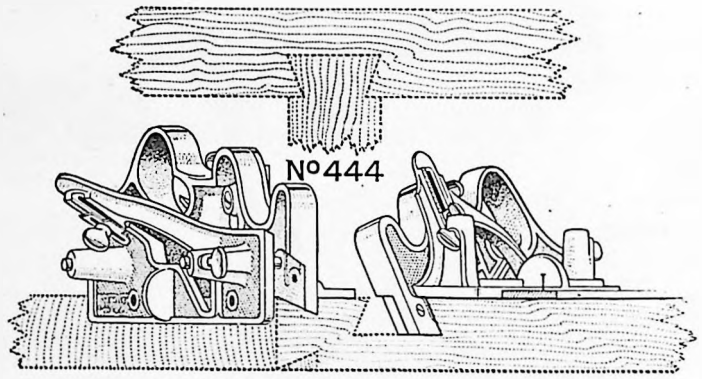
ILLUSTRATION No. 95

Designed especially for trimming or smoothing the ends of boards, such as sidings, etc., for a square or close fit. It has a right-angle rest or guide from the cutter edge and the cutter works on a skew, giving an easy shaving cut. In the rest or guide are two screw holes to which wood blocks of various levels may be attached, enabling the user to make a slanting cut.

No. 95, 6 inches long, ⅞-inch cutter. Japanned. Weight 1¼ lbs. Packed one in box. Each..$1.30

Planes

Stanley Dovetail Tongue and Groove

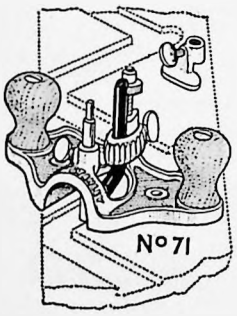


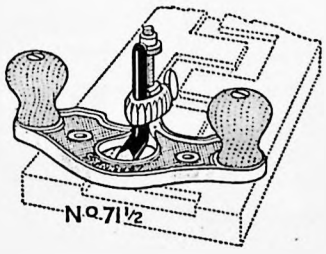
This novel tool will cut any size grooves and tongues to fit with sides at flare of 20 degrees, where the width of the neck is more than one-quarter of an inch and the depth of groove not more than three-quarters of an inch. The tongue and groove are cut separately, and can be made with parallel or tapering sides.

The compactness of the tool is shown in the illustration, where the cut on the left shows the plane assembled for cutting the tongue, and that on the right the plane assembled for cutting the groove. All parts are carefully machined and are interchangeable. The entire tool is heavily nickel-plated and, together with its cutters, is packed in a neat wooden box.

No. 444 9 inches long, nickel-plated, weight 6 pounds. Each.....$7.65

Stanley Router





These planes are for surfacing the bottom of grooves or other depressions parallel with the general surface of the work. They are made in two styles, differing in the form of throat. The closed throat is the ordinary form of router plane; the open throat, an improved design, giving more freedom for chips and a better view of the work and cutter. The latter has an attachment for regulating the thickness of the chip, and a second attachment for closing the throat for use on narrow surfaces. The bottoms of both styles are designed so that an extra wooden bottom of any size desired can be screwed on, enabling the user to router on large openings.

A ¼ and ½-inch cutter are furnished with each plane. Cutters have screw adjustment, and can be held as shown in illustrations, or on the back of the cutter post, for bull-nose work.

Nos.	Length, Inches	Kind of Throat	Finish	Weight, Lbs.	Each
71	7½	Open	Nickel-plated	2⅝	$2.85
71½	7½	Closed	Nickel-plated	2⅛	2.25

Packed in one box

Planes

Adjustable Circular

Victor

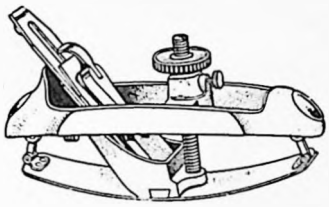
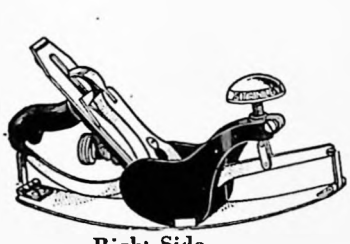


ILLUSTRATION No. 20

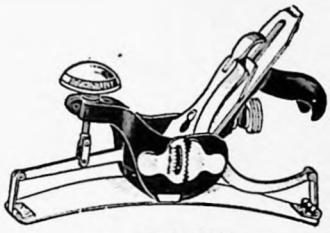
Have flexible steel faces which can be accurately adjusted for planing the inside or outside of circles. The cutters are the same as in "Bailey" and "Bed Rock" Planes.
The face is fastened at each end to the Plane Body, and adjusted by a screw at the center. This construction gives great strength and accuracy.

No. 20 Nickel-plated, 10 inches long, 1¾-inch cutter, weight 4 pounds. Each.....$6.40
Packed one in box.

Stanley



Right Side



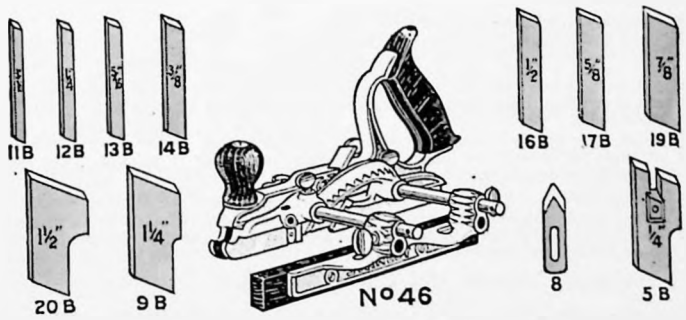
Left Side

ILLUSTRATION No. 113

The face is fastened at its center to the Plane Body, and adjusted at the ends by means of a screw and levers.
Has graduated scale for setting the face.

No. 113 Japanned, 10 inches long, 1¾-inch cutter, weight 3½ pounds. Each.....$5.20
Packed one in box.

Plow, Dado, Filletster and Matching



Skew cutters are the feature of this plane. It consists of a main stock carrying a spur, a depth gauge and a slitting cutter, a sliding section carrying a spur and forming an extra sole for the plane, and a fence (rosewood face), which can be set for either plow or filletster work. It has a rosewood handle and knob.
The cutters comprise 8 plow and dado bits, ⅛, ¼, ⅛, 3/16, ½, 5/8, ⅞ and 1¼ inches; a 1¼-inch filletster cutter, a ¼-inch tonguing, and a slitting cutter.

No.	Length, Inches	Finish	No. of Cutters	Weight, Lbs.	Each
46	10½	Nickel-plated	11	5¾	$7.65

Planes

Stanley Combination

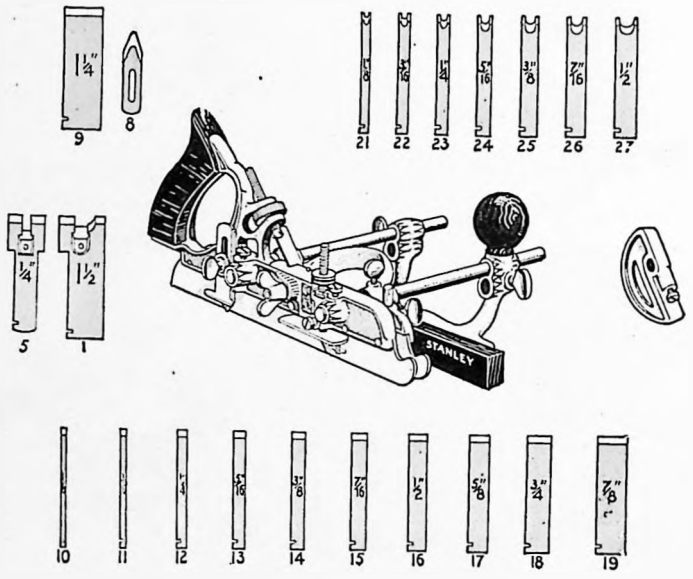


ILLUSTRATION No. 45

Seven tools in One. In compact and practical form. 1. Beading and Center Beading Plane. 2. Plow. 3. Dado. 4. Rabbet and Filletster. 5. Match Plane. 6. Sash Plane. 7. Slitting Plane.

The Plane has two principal parts, a main stock and a sliding section. The main stock carries the handle, cutter adjustment, a slitting tool, depth gauge, and forms a bearing for one edge of the cutter. The sliding section slides on two arms secured in the stock and has a bearing for the other edge, allowing cutters of different widths to be used. A fence also slides on these arms for use when working as a plow, beader or filletster, to gauge the distance from the cutter to the edge of the board, and to keep the cutter at right angles to same. When used as a filletster the fence slides under the bottom of the plane and determines the width of cutter exposed to the work.

The Plane is fitted with spurs for use across the grain, etc., and can be used either right or left hand.
With each Plane are furnished twenty-one cutters, all of which are shown in the cut. The cutters, together with the Plane, are packed in a neat box.

All metal parts are nickel-plated. The handle, knob and fence are made of selected rosewood.

For beading at a distance from the edge of a board, attach cam rest (see cut at right of Plane) to the front arm between the sliding section and fence to prevent the fence sagging. In certain work attach same to the rear arm to prevent the Plane from rocking. Cutters shown above are furnished with each Plane.

No. 45 Nickel-plated, with 21 cutters, weight, 9½ pounds. Each.....$11.15

Prices on individual or special cutters, special bottoms and parts of Stanley combination may be had upon application.

In ordering, specify what NUMBER you require.

Planes

Stanley Combination

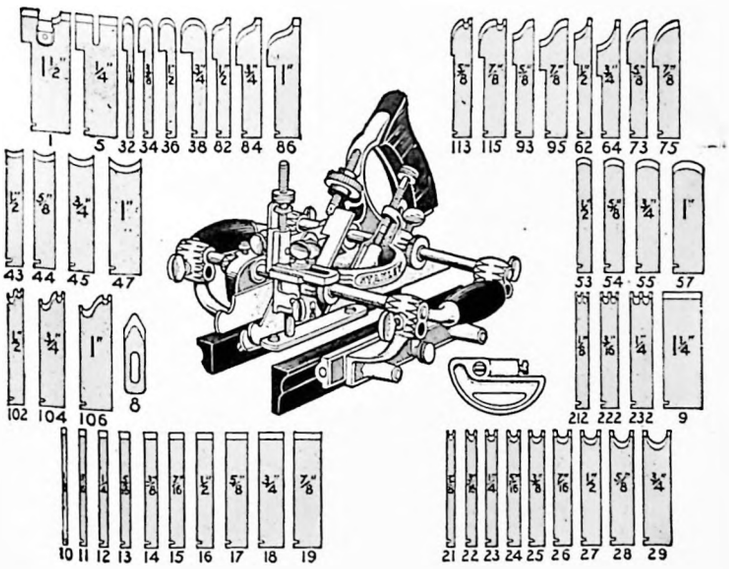


ILLUSTRATION No. 55

This tool, in addition to being a Beading and Center Beading Plane, a Plow, Dado, Rabbet, Filletster, and Match Plane, a Sash Plane and a Slitting Plane, is also a superior Moulding Plane, and will accommodate cutters of almost any shape and size.

The regular equipment sent with the Plane comprises fifty-two cutters, all of which are shown in the cut. These cutters, together with the Plane and all its attachments, are packed in a neat box.

Cutters of practically any form can be used in the Plane, which the owner can make from blanks or order from sketch.

All metal parts of the Plane are nickel-plated. The handle and fences are made of selected rosewood.

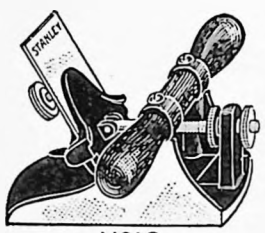
Book of instructions supplied with each Plane.

No. 55 Nickel-plated, with 52 Cutters, weight 15¼ pounds. Each.....$21.90

Cutters shown above are furnished with each Plane. Prices for individual cutters may be had on application. In ordering, specify what Number you require.
Prices on special cutters, special bottoms and parts of Stanley Combination may also be supplied upon request.

Scraper Planes

Stanley



N°12

N°112

No. 12 Double Handle Veneer. The handles are of rosewood with a double grip, and being placed across the center of the tool, give it a good balance. The blades are adjustable endwise and for angle, and can be firmly locked in position desired.
They can also be used as Toothing Planes, doing excellent work in scraping off old paint or glue, and in roughing up the surface of wood preparatory to veneering same. 9½ inches long, 3-inch Blade, Japanned Iron Face, weight 3¾ pounds.

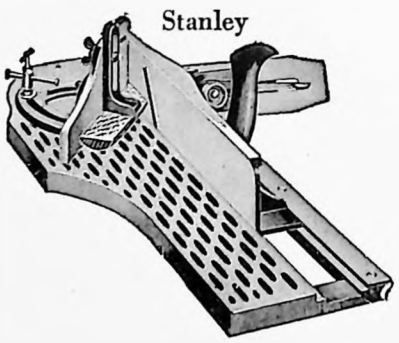
No. 12 Each $3.45

No. 112 Single Handle Veneer. Has a rosewood handle and knob, having the same form as the regular "Bailey" Plane, and is preferred by some users to the two-handle or double-grip form of Scraper Plane.
The blades are adjustable endwise and for angle, and can be firmly locked in position desired. It can be used as a Toothing Plane, doing excellent work in scraping off old paint or glue, and in roughing up the surface of wood preparatory to veneering same. 9 inches long, 3-inch Blade, Japanned, weight 4 pounds. Packed one in box.

No. 112 Each $3.35

Shoot Board and Plane

Stanley



No. 52

This combination of Plane and Shoot Board (sometimes called a "Jack Board") is a very important tool for all wood workers. The nicety of adjustment, the accuracy with which all parts are made, and the general solid construction, make it particularly valuable for Pattern Makers, Cabinet Makers, Printers, Picture Framers and Electrotypers. Amateurs will also find this tool very useful.
The Board is made of special iron, is of ribbed construction, and has an adjustable runway, accurately machined for the Plane.
The swivel is indexed at 45 and 90 degrees for planing a mitre or square, but can be securely locked by means of a clamping screw at any angle desired between 0 and 90 degrees, the quadrant being graduated between these points.
The swivel is also fitted with a sliding back that can be adjusted close to the Plane, thus supporting the work to the edge and preventing it from splintering. It is further provided with a sliding back clamp, which is designed to hold any shaped work in position to be planed.
The Plane is especially constructed for the Board, and has rosewood handle and knob.
The Cutter is fitted with the regular "Bailey" adjustment for depth of cut, also has a lateral adjustment so that a cut giving any ordinary draft to a pattern can be made and, being set on a skew, will make a very smooth, clean cut. Packed one in a box.

No. 52 Board, 22 inches long, Plane 15 inches long, 2⅜-inch Cutter, weight 17½ pounds.

No. 52 Each $15.25

Scrapers

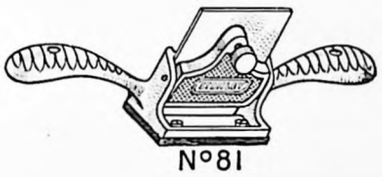
Cabinet

STANLEY
N° 0

Rectangular

These scrapers are made of high-grade steel and great care is taken to give them a special temper for this work.

Inches	3 x 4	3 x 5	3 x 6	1 x 6
Stanley. Each	$0.35	$0.40	$0.43	
Inches	3 x 4	3 x 5	3 x 6	1 x 6
H. S. & Co. Per dozen	$1.73	$2.16	$2.45	$1.20
Each	.16	.20	.23	.11



No. 81 has a rosewood face for use in the finest cabinet work. The handles are raised to protect the hands, and pierced so that it can be hung up out of the way. Body and handles cast in one piece.

No. 81 10 inches long, 2½-inch Blade, nickeled; weight, each 2¼ pounds.
Each $1.80

Packed one in box.

No. 82 has an adjustable single handle which can be tilted to give the blade any angle desired. Special blades of different forms and widths can be securely held in any position required, thus permitting the tool to be worked in many places inaccessible to other scrapers. Handle and knob of hardwood.

No. 82 14½ inches long, 3-inch Blade, japanned, weight each 1¾ pounds
Each $1.50

Packed one in box.

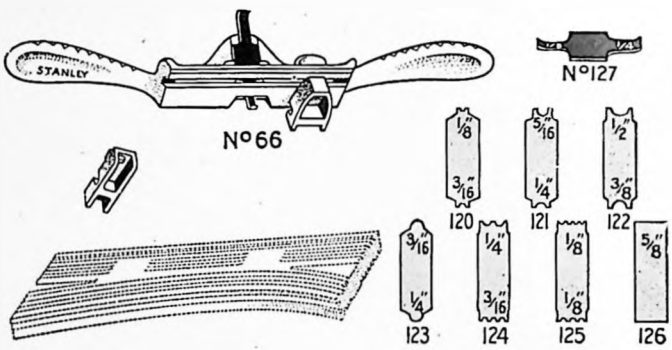
Perfection

ILLUSTRATION No. 125

With ball of hand on hand rest, fingers clasping under side, stroke can be regulated and strain on hand and wrist relieved in carrying tool forward. Cutting edge of blade rigidly held between steel plates, which prevents chattering. Any blade up to 3 inches wide and of proper gauge can be used. Blade furnished, 3 x 5 inches, No. 16 gauge. Handle adjusts instantly to any desired angle, up or down and sidewise by a slight turn of handle. Holder being reversible, both ends of blade can be used without removing from holder—one for rough cut, other to finish. Each..... $2.40

Carriage Makers' Tools

Stanley Universal Beaders



Two handed, for beading, reeding or fluting straight or irregular surfaces and for light routering. The sample illustrated shows some of the work that it will do. With each beader are furnished a square gauge for straight work and an oval gauge for curved work. There are also furnished eight cutters sharpened at both ends and embracing the following assortment; 6 single beads, ⅛, 3/16, ¼, 5/16, ⅜ and ½ inch; 2 fluting tools, 3/16 and ¼ inch; 4 reeding tools (2 beads 3/16 inch, 3 beads ¼ inch, and 3 beads ⅛ inch and 4 beads ⅛ inch), 2 routers ⅛ and ¼ inch, and a ⅝-inch blank, which latter cutter the owner can file up as he desires. The handles are curved so as to insure ample room between the workman's hands and the surface of the work. Made entirely of metal. Extra moulding cutters $0.05 each.

No. 66 11½ inches long, 8 cutters, nickel-plated, weight 1⅜ pounds. **Each..$1.35**
Packed one in box.

Cabinet Scraper

Nicholls

Leather clamped on blade prevents vibration. Can be worked up close to wall or projections. Blade easily adjusted without the use of wrench or screwdriver. Wing nut to loosen blade. No hole in blade, therefore an old piece of saw blade can be used. So constructed that it does not tire the hands of the operator. Rigid and substantial.

Each $1.30
Packed one in box.

Iron Spokeshaves

Stanley

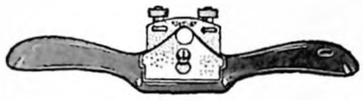


ILLUSTRATION No. 151

ILLUSTRATION No. 152

These improved Spokeshaves have a Lever Cap fastening the cutter in such a manner as to bring an even pressure on the cutting edge.

The important feature is that the cutter can be quickly adjusted both endwise and sidewise by means of the adjusting screws which engage the slots near the end.

The cutters are made from a high grade of steel, well tempered and sharpened, ready to use. The handles are japanned and through each a hole is made to enable the owner to hang the tool up out of the way.

Made in two styles, one with raised and the other with straight handles.

		Per Dozen	Each
No. 151	Raised handle 10 inches long, 2⅛-inch cutter.....	$5.95	$0.55
No. 152	Straight handle 10 inches long, 2⅛-inch cutter.....	5.95	.55

Has a cutter and cap iron, fastened by a thumb-screw in such a manner as to bring an even pressure on the cutter edge, and at the same time allow adjustment without the use of a screwdriver.

		Per Dozen	Each
No. 51	Double-iron, improved, 10 inches long, 2⅛-inch cutter.....	$4.30	$0.40

Has a cutter and cap iron, fastened by a thumb-screw in such a manner as to bring an even pressure on the cutter edge, and at the same time allow adjustment without the use of a screwdriver.

		Per Dozen	Each
No. 52	Double-iron, improved, 10 inches long, 2⅛-inch cutter.....	$4.30	$0.40

By means of a thumb-screw the mouth can be opened or closed as coarse or fine work may be required.

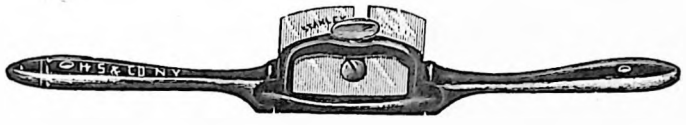
		Per Dozen	Each
No. 53	Adjustable, 10 inches long, 2⅛-inch cutter.....	$5.40	$0.50

Extra Cutters

	Per Dozen	Each
For Nos. 51 and 53.....	$1.40	$0.13

Iron Spokeshaves

Stanley



By means of a thumb-screw the mouth can be opened or closed as coarse or fine work may be required.

		Per Dozen	Each
No. 54	Adjustable, 10 inches long, 2⅛-inch cutter.....	$5.40	$0.50

		Per Dozen	Each
No. 55	Double-iron, hollow-face, 10 inches long, 2⅛-inch cutter.....	$4.10	$0.38

Universal

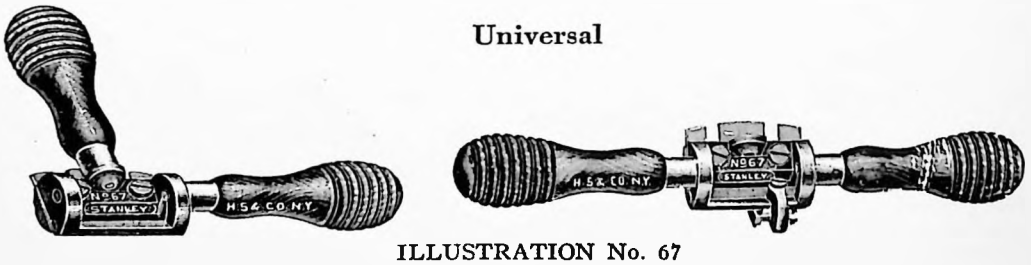


ILLUSTRATION No. 67

The rosewood handles are detachable, and either one can be screwed into the top of the stock, enabling the user to work into corners or panels, as no other Spokeshave can do. One handle has a right, the other a left-hand thread, and the proper sockets to receive them are threaded accordingly. This prevents any possibility of the handles working loose when the tool is in use.

The handles as well as the sockets in which they belong are lettered to avoid mistakes. Two detachable bottoms are furnished, one for straight and the other for circular work. A movable width gauge allows the tool to be used in rabbeting.

Nickel-plated, 9¼ inches long, 1⅞-inch cutter, weight ¾ pound.

Per dozen	$19.88
Each	1.84

Iron Spokeshaves

M. F. Co.

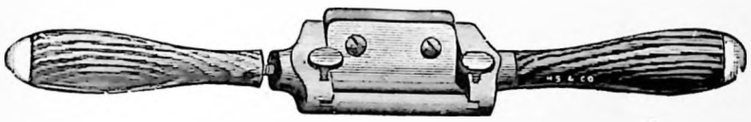


ILLUSTRATION No. 2 FOUR FACED

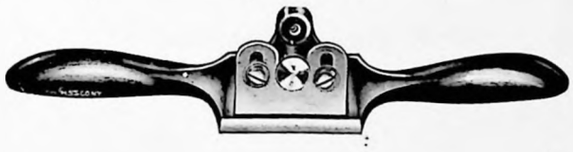
The tropical wood handles are removable for convenience in working in narrow places; all metal parts are polished and nickeled.

Quickly adjustable throat regulator, which may be turned about to present four different faces to the knife—one flat, two oval or convex, and one concave. Wide or narrow throat may be had.

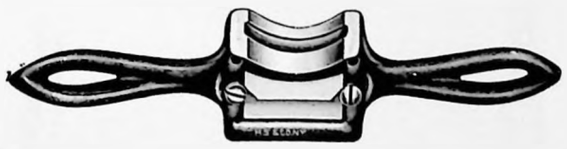
Knife is adjustable with set screws. Length of blade, 2 inches; length of whole tool, 11 inches.

Each $2.10

A. A. Wood



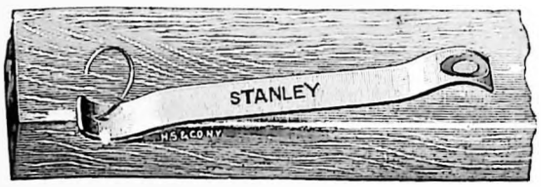
		Per Dozen	Each
No. F1	Adjustable, length 10¼ inches, 2-inch steel cutters.....	$7.67	$0.71



		Per Dozen	Each
No. F2	Double, concave and straight cutters, length 10 inches, 1⅞-inch steel cutters.....	$7.67	$0.71

Cornering Tools

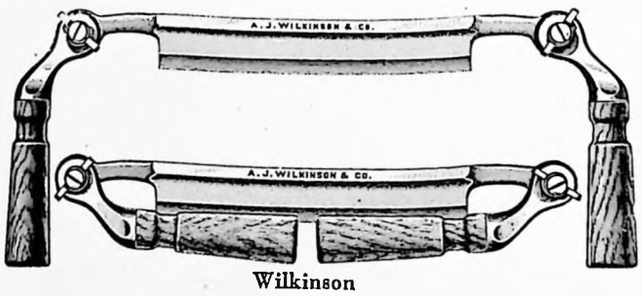
Stanley



Used by all wood workers in rounding sharp corners. The tool is made in two numbers, with a different size cutter at each end, so sharpened that it will always cut with the grain without changing position of work.

		Each
No. 28	Length 5½ inches, cutters $\frac{1}{16}$ and ⅛ inch	$0.31
No. 29	Length 5½ inches, cutters $\frac{3}{16}$ and ¼ inch	0.33

Carpenters' Draw Knives



Wilkinson

Folding handle. Blade is 1⅜ inches wide, of best cast steel. Cutting edge protected when folded.

Length, inches	6	8
Each	$2.40	$2.85

Razor blade, 1⅜ inches wide.

Length, inches	6	8	10
White, No. 31. Each	$1.85	$2.10	$2.35
Witherby, No. 115. Each	1.35	1.35	1.55

Hatchets

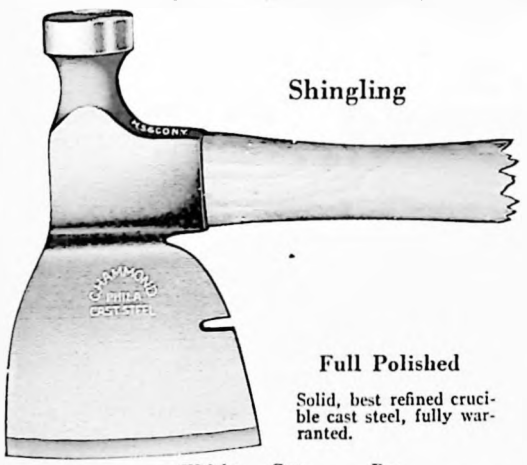
The "C. Hammond" Brand Hatchets, bronze finish, are forged, having Swedish iron body with best tool steel on head and inserted for cutting edge. No other known metal is so tough and yet so pliable as Swedish iron. These qualities give the required strength to the hatchet as a whole, and especially over the eye, where the greatest strength is required.

The fancy light pattern, thin blade hatchets are forged from the best refined crucible steel.

Each hatchet is tempered individually by experienced mechanics and hardened to the proper degree for the purpose for which the tool is intended. The bit and face are tempered separately and independent of each other.

Every article is examined singly and separately by experienced inspectors after being finished, and thrown out if the slightest defect is found.

A better hatchet than the "C. Hammond" brand cannot be produced. Our slogan, "We could not make a better tool if paid double what we now ask," is absolutely true.

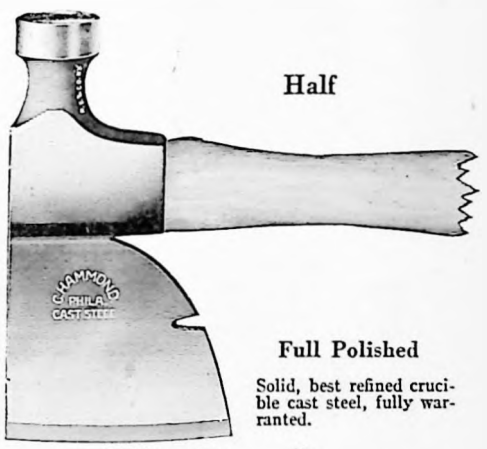


Shingling

Full Polished

Solid, best refined crucible cast steel, fully warranted.

No.	Size	Weight, Lb.	Weight, Oz.	Cuts, Inches	Per Dozen	Each
26	2	1	4	3½	$23.75	$2.20

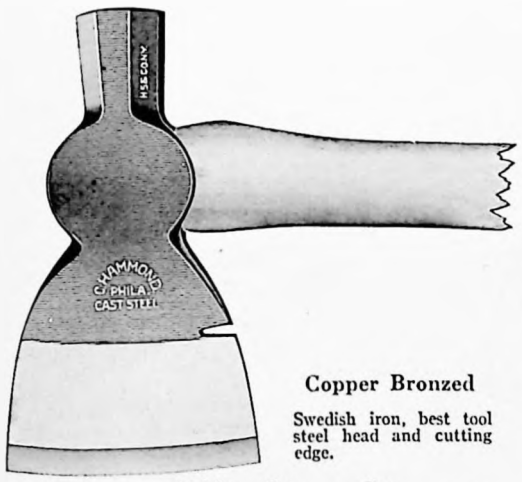


Half

Full Polished

Solid, best refined crucible cast steel, fully warranted.

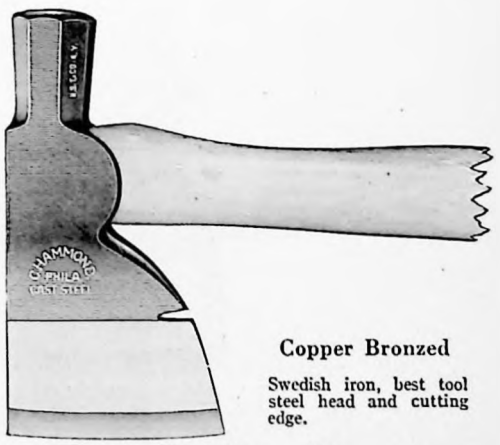
No.	Size	Weight, Lb.	Weight, Oz.	Cuts, Inches	Per Dozen	Each
46	2	1	4	3¼	$23.75	$2.20



Copper Bronzed

Swedish iron, best tool steel head and cutting edge.

Nos.	Size	Weight, Lb.	Weight, Oz.	Cuts, Inches	Per Dozen	Each
10	1	1	4	3½	$15.10	$1.40
11	2	1	8	3¾	16.20	1.50
12	3	1	12	4	17.30	1.60



Copper Bronzed

Swedish iron, best tool steel head and cutting edge.

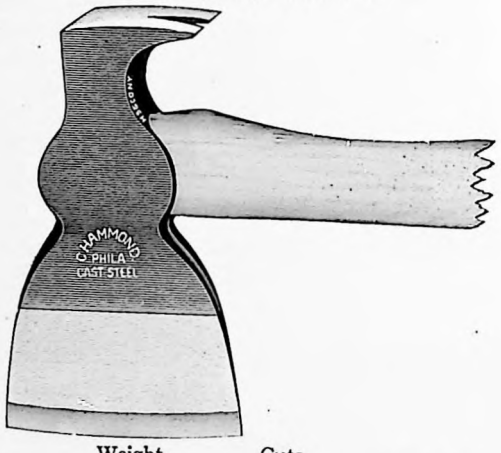
Nos.	Size	Weight, Lb.	Weight, Oz.	Cuts, Inches	Per Dozen	Each
30	1	1	4	3¼	$16.20	$1.50
31	2	1	8	3½	17.30	1.60
32	3	1	12	3¾	18.35	1.70

Hatchets

Hammond

Claw

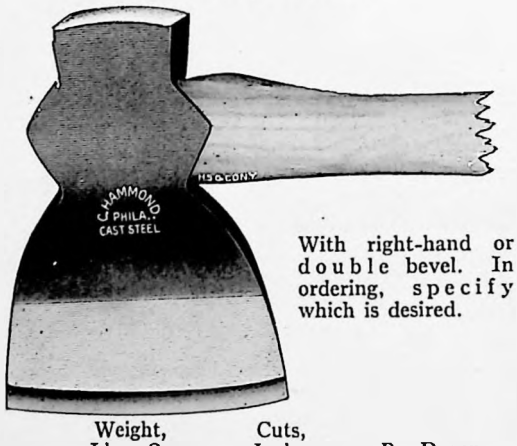
Cast steel, fully warranted



Nos.	Size	Weight, Lb.	Ozs.	Cuts, Inches	Per Dozen	Each
60	1	1	4	3½	$17.30	$1.60
61	2	1	8	3¾	18.35	1.70
62	3	1	12	4	18.90	1.75

Broad

Cast steel, fully warranted



With right-hand or double bevel. In ordering, specify which is desired.

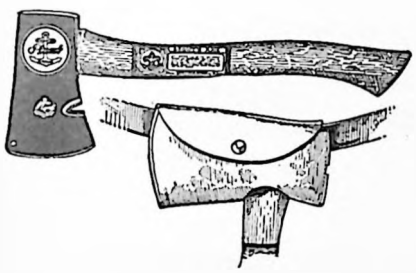
Nos.	Size	Weight, Lb.	Ozs.	Cuts, Inches	Per Dozen	Each
120	1	1	6	4	$20.00	$1.85
121	2	1	10	4½	22.15	2.05
122	3	2	4	5	24.85	2.30
123	4	2	10	5½	27.50	2.55
124	5	3		6	31.86	2.95

Above prices are subject to change without notice

Hatchets

Boy Scout

H. S. & Co.

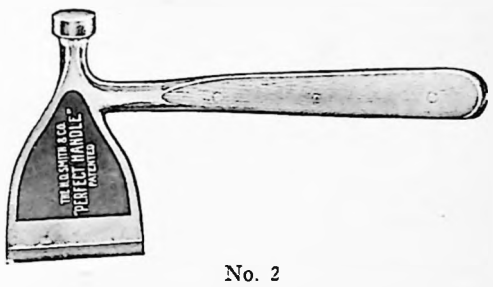


With Nail Slot

Weight, with handle, 1 pound, 5 ounces.

	Per Dozen	Each
With sheath	$14.35	$1.44
Without sheath	11.65	1.17

Perfect Handle



No. 2

Drop forged from one piece of solid steel. Wood handle is riveted and waterproofed—the wood to the drop forging. Is unbreakable. Blade can be ground down to the head.

Length, inches	13½
Cutting edge, inches.....	3½
Weight, pounds	1⅝
Dozen	$15.35
Each	1.42

Safety Pocket

ILLUSTRATION No. 3

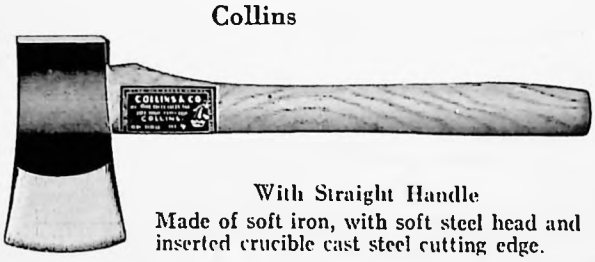
Marble

ILLUSTRATION No. 6

Blades are tool steel, correctly tempered and sharpened. Nickel-plated guard and receiver.

		Each
No. 3	Steel handle, 27 ounces, length 12 inches, blades 2½ x 4⅜ inches.....	$3.15
No. 6	Hickory handle, 22 ounces, length 12 inches, blades 2¾ x 4¾ inches.....	2.00

Axe Pattern
Collins



With Straight Handle

Made of soft iron, with soft steel head and inserted crucible cast steel cutting edge.

Number	1	2	3
Cuts, inches	3½	3¾	3⅞
Weight, with handle, lbs.	2	2½	3
Per dozen	$13.18	$13.40	$13.60
Each	1.22	1.24	1.26

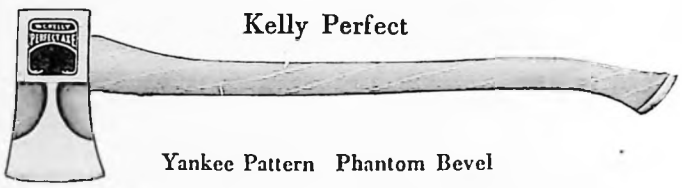
Hunter's Pattern
American A. & T. Co.
Ridge Brand

The cutting edge is finest crucible tool steel. Red enamel finish.

Number ...	0	1	2	3
Weight, lbs.	1¼	1½	1¾	2
Per dozen..	$12.65	$12.95	$12.95	$13.20
Each	1.17	1.20	1.20	1.22

Wood Axes

Kelly Perfect



Yankee Pattern Phantom Bevel

Yankee Pattern, Phantom Bevel. Full polished, the blade is made entirely of steel, shaped and formed so as to cut with least labor.

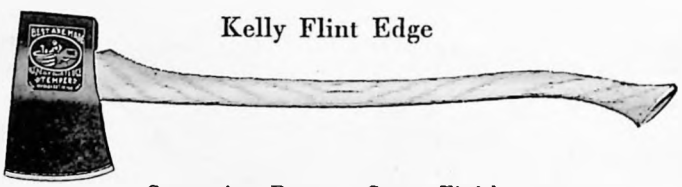
Weight, lbs.	4	5
Length of handle, before driven, inches	34	36
Per Dozen	$24.85	$26.45
Each	2.30	2.45

Collins

Collins Axes have inserted hand-forged crucible steel bits. Handles are best grade of hickory, 36 inches long.

Weight, lbs.	4	5
Per dozen	$22.00	$22.65
Each	2.20	2.25

Kelly Flint Edge



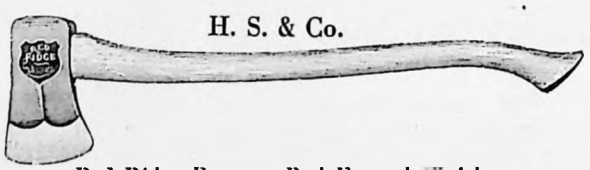
Connecticut Pattern Canon Finish

Hand tempered in natural gas by a special process. Made of doubly-refined steel, with crucible bit. With No. 1 elastic hickory handles.

Weight, lbs.	3	4	5
Length of handle, before driven, inches	32	34	36
Per Dozen	$22.70	$23.20	$24.30
Each	2.10	2.15	2.25

Boys' Axes

H. S. & Co.



Red Ridge Pattern Red Enamel Finish

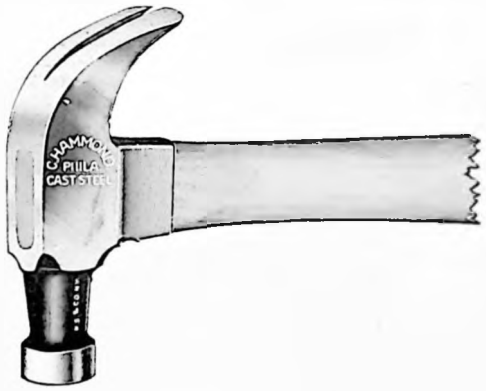
Number	2
Weight, lbs.	2¼
Length of handle, inches	28
Per Dozen	$15.10
Each	1.40

Above prices are subject to change without notice

Nail Hammers

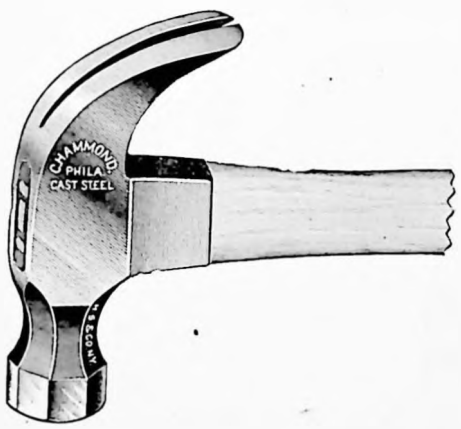
Hammond

Forged from best refined crucible cast steel, tempered and hardened to the proper degree for purpose for which tool is intended. Face and claw tempered separately and thoroughly tested before being finished, insuring a perfect, guaranteed hammer.



Adze Eye, Bell Face

Nos.	Size	Weight, Lb.	Oz.	Per Dozen	Each
183	11	1	4	$16.20	$1.50
182	11½	1		15.10	1.40
181	12		13	14.60	1.35
180½	12½		9	14.00	1.30
180	13		7	13.50	1.25
180A	14		5	12.95	1.20
180B	15		8	12.95	1.20

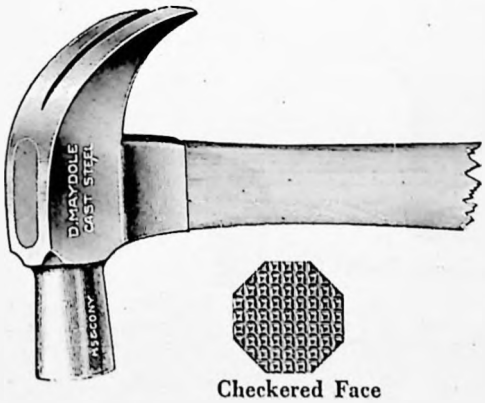


Adze Eye, Octagon Face and Neck

Nos.	Size	Weight, Ounces	Per Dozen	Each
0-172	1½	16	$17.30	$1.60
0-171	2	13	16.75	1.55
0-170½	2½	9	16.20	1.50

Nickel Plated, Ebonized Handle

Nos.	Size	Weight, Ounces	Per Dozen	Each
0N172½	1½	16	$22.70	$2.10
0N171	2	13	22.15	2.05



Checkered Face

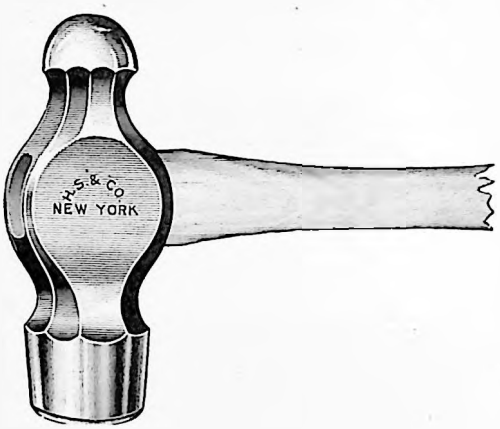
Adze Eye, Plain Face

Nos.	Size	Weight, Lb.	Oz.	Per Dozen	Each
174	0	1	8	$22.70	$2.10
173	1	1	4	16.20	1.50
172	1½	1		15.10	1.40
171	2		13	14.60	1.35
170½	2½		9	14.00	1.30
170	3		7	13.50	1.25
170A	4		5	12.95	1.20
170B	5		3	12.95	1.20

173C Adze Eye, Checkered Face, Size 1; weight, 1 lb. 4 ozs.
Per Dozen $17.80
Each 1.65

Machinists' Hammers

Cast Steel. Fully Warranted

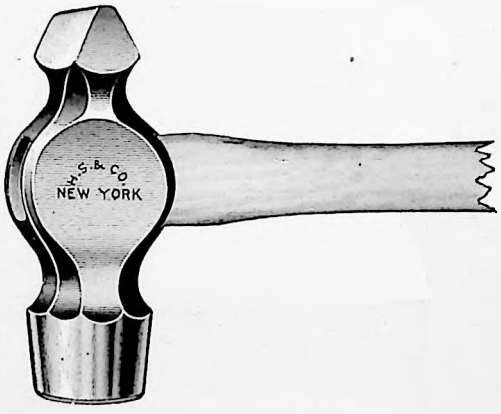


Atha—Ball Pein

Nos.	0000	000	00	0	1	2	3	4
Weight, lbs.	⅜	½	¾	1	1¼	1½	1¾	2
Per Dozen	$9.60	$9.60	$9.60	$10.00	$10.80	$11.55	$12.55	$13.30
Each	.89	.89	.89	.93	1.00	1.07	1.16	1.23

Hammond—Ball Pein

Nos.	0000	000	00	0	1	2	3	4
Weight, lbs.	⅜	½	¾	1	1¼	1½	1¾	2
Per Dozen	$10.80	$10.80	$10.80	$11.25	$12.15	$13.05	$13.95	$14.85
Each	1.00	1.00	1.00	1.04	1.13	1.21	1.29	1.38



Atha—Cross Pein

	Size	Weight, Lbs.	Ozs.	Per Dozen	Each
No. 352	2	1	8	$13.20	$1.22
No. 354	4	2		14.90	1.38

 Above prices are subject to change without notice

Tack Hammers

H. S. & Co.

ILLUSTRATION No. 307

With claw, forged steel.

Size 1 Weight, 5½ ounces; length over all, 12 inches.

Per Dozen $6.48

Each ..... .60

Robertson

Horseshoe Magnet

Fine steel forgings warranted to be strong, permanent magnets.

No. 412 4-ounce polished head, 12-inch handle.

Per Dozen $8.64

Each ..... .80

Riveting Hammers

H. S. & Co.

Forged Steel, Fully Warranted

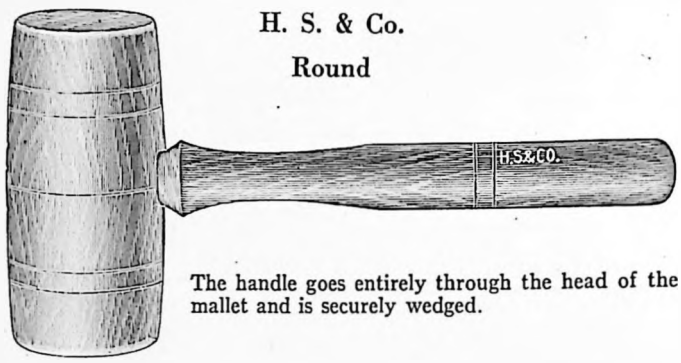
Plain Eye, Plain Face

Sizes	000	00	0	1	2	3	4	5	6
Weight, each	1½ oz.	2 oz.	3 oz.	4 oz.	6 oz.	8 oz.	12 oz.	1 lb.	1¼ lb.
Per Dozen..	$6.48	$7.24	$8.00	$8.64	$10.16	$10.80	$11.56	$14.48	$15.88
Each	.60	.67	.74	.80	.94	1.00	1.07	1.34	1.47

Mallets

H. S. & Co.

Round



The handle goes entirely through the head of the mallet and is securely wedged.

Second Growth Hickory

Nos.	00	0	1	2	3	4	5
Diameter of face, inches	4½	4	3½	3	2½	2¼	2
Per Dozen	$7.20	$6.48	$5.76	$4.68	$4.32	$3.96	$3.60
Each	.67	.60	.53	.43	.40	.37	.33

Lignum Vitae

Nos.	00	0	1	2	3	4	5
Diameter of face, inches	4½	4	3½	3	2½	2¼	2
Per Dozen	$9.40	$8.64	$7.00	$5.72	$5.08	$4.68	$4.32
Each	.87	.80	.65	.53	.47	.43	.40

Jewelers' Lignum Vitae

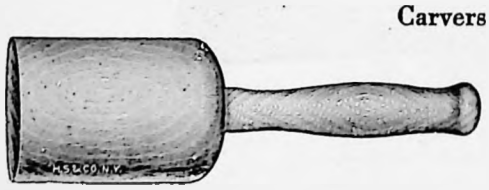
Nos.	6	7	8
Diameter of face, inches	1¾	1½	1¼
Per Dozen	$3.78	$3.78	$3.78
Each	.35	.35	.35

Raw Hide

Made entirely of hide, excepting handle.

Nos.	1	2	3	4	5
Diameter of face, inches	1¼	1½	1¾	2	2¾
Per Dozen	$7.00	$8.10	$9.18	$11.88	$26.45
Each	.65	.75	.85	1.10	2.45

Carvers



Lignum-Vitæ

Carefully selected, thoroughly seasoned, the handle is exactly centered, giving an evenly-balanced mallet.

Nos.	1	2	3
Diameter of face, inches	2½	3	3½
Per Dozen	$5.72	$6.45	$7.24
Each	.53	.60	.67

 Above prices are subject to change without notice

Firmer Chisels

Buck Bros.

Tanged

Buck Brothers, in their manufacture of chisels and other carpenter tools, use Genuine Jessop Tool Steel, imported direct from Sheffield, England.

Jessop Tool Steel is undoubtedly the best made and is exceptionally uniform in quality. All Buck Tools are carefully made and finished by experienced workmen and each one is subjected to a rigid inspection and test before leaving the factory.

They are fully warranted by the makers against all defects in material and workmanship and have been favorite tools with wood-working mechanics since 1853.

No. 2 PLAIN EDGE

Best quality polished applewood handles, with cast brass ferrules. Sharpened ready for use. The 1-inch chisel is 5½ inches long from bolster to point.

Size, Inches	1/8	3/16	1/4	5/16	3/8	1/2	5/8
Per Dozen	$4.10	$4.10	$4.10	$4.10	$4.10	$4.54	$4.97
Each	.38	.38	.38	.38	.38	.42	.46

Size, Inches	3/4	7/8	1	1¼	1½	2
Per Dozen	$5.40	$5.94	$6.26	$8.10	$9.72	$13.61
Each	.50	.55	.58	.75	.90	1.26

In Sets of 12

	Per Set
Set A (containing 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1¼, 1½, 1¾ and 2 inches)	$7.35

No. 30 BEVELED EDGE

Leather tipped, polished-hickory handles of extra quality with cast brass ferrules. Sharpened ready for use. The 1-inch chisel is 5½ inches from bolster to point.

Size, Inches	1/8	1/4	3/8	1/2	5/8	3/4
Per Dozen	$6.32	$6.32	$6.32	$6.83	$7.25	$7.56
Each	.59	.59	.59	.63	.67	.70

Size, Inches	7/8	1	1¼	1½	1¾	2
Per Dozen	$7.77	$8.28	$10.87	$12.32	$15.32	$17.29
Each	.72	.77	1.00	1.14	1.42	1.60

In Sets of 12

	Per Set
Set A (containing 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1¼, 1½, 1¾ and 2 inches)	$9.50

Firmer Chisels

Buck Bros.
Socket

No. 35 PLAIN EDGE

With polished applewood handles, sharpened ready for use. The 1-inch chisel has 5½-inch blade.

Size, Inches	1/8	1/4	3/8	1/2	5/8	3/4
Per Dozen	$6.22	$6.22	$6.22	$6.60	$7.34	$7.90
Each	.58	.58	.58	.62	.68	.74
Size, Inches	7/8	1	1¼	1½	2	
Per Dozen	$8.49	$9.20	$10.13	$11.05	$13.85	
Each	.79	.85	.94	1.02	1.20	

In Sets of 12

Containing 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1¼, 1½, 1¾, 2 inches.

Set A, with Plain Handles.....Per set, $8.25
Set A, with Leather Top Handles.....Per set, 9.65

No. 36 BEVELED EDGE

Extra quality, polished hickory handles with leather tips. Sharpened ready for use. The 1-inch chisel has 5½-inch blade.

Size, Inches	1/8	1/4	3/8	1/2	5/8	3/4
Per Dozen	$9.07	$9.07	$9.07	$9.72	$10.26	$11.00
Each	.84	.84	.84	.90	.95	1.02
Size, Inches	7/8	1	1¼	1½	2	
Per Dozen	$11.56	$12.20	$13.93	$15.00	$19.55	
Each	1.07	1.13	1.29	1.39	1.81	

In Sets of 12

Set A (containing 1/8, 1/4, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1¼, 1½, 1¾ and 2 inches)....Per set, $12.40

Mortise Chisels

Buck Bros.
Socket

No. 48

The 3/8-inch size has 6¾-inch blade. With polished hickory handle. Sharpened ready for use.

Size, Inches	1/8	3/16	1/4	5/16	3/8	1/2	5/8
Per Dozen	$11.66	$12.31	$13.18	$13.50	$14.26	$15.88	$18.47
Each	1.08	1.14	1.22	1.25	1.32	1.47	1.71

Firmer Gouges

Buck Bros.

Tanged

No. 8

No. 8 Outside bevel, regular sweep.

Best quality polished applewood handles with cast brass ferrules, sharpened ready for use. The 1-inch gouge is 5½ inches long from bolster to point.

No. 8 Outside Bevel

Size, Inches	1/8	3/16	1/4	3/8	1/2	5/8	3/4
Per Dozen	$5.80	$5.80	$5.83	$5.83	$6.16	$6.59	$7.13
Each	.54	.54	.54	.54	.57	.61	.66

Size, Inches	7/8	1	1¼	1⅜	1½	2
Per Dozen	$7.88	$8.21	$10.69	$11.66	$12.74	$17.82
Each	.73	.76	.99	1.08	1.18	1.65

No. 8 Outside Bevel, in Sets of 12

Set A (containing ⅛, ¼, ⅜, ½, ⅝, ¾, ⅞, 1, 1¼, 1½, 1¾ and 2 inches).....Per set, $9.80

Buck Bros.

Socket

No. 42

Outside bevel, regular sweep, sharpened ready for use. The 1-inch gouge has 5½-inch blade. Handled with first quality applewood.

No. 42

Size, Inches	1/4	3/8	1/2	3/4	1	1¼	1½
Per Dozen	$9.18	$9.18	$9.83	$11.12	$12.96	$14.36	$15.98
Each	.85	.85	.91	1.03	1.20	1.33	1.48

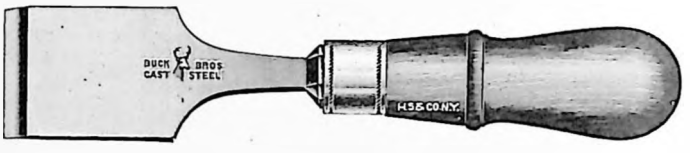
In Sets of 12

Set A (containing ⅛, ¼, ⅜, ½, ⅝, ¾, ⅞, 1, 1¼, 1½, 1¾ and 2 inches).....Per set, $13.20

Butt or Pocket Chisels

Used for fitting Butts when hanging doors. Owing to size, they are sometimes called Pocket Chisels.

Buck Bros. Tanged



No. 3 PLAIN EDGE

Handled and sharpened ready for use. 9 inches long over all.

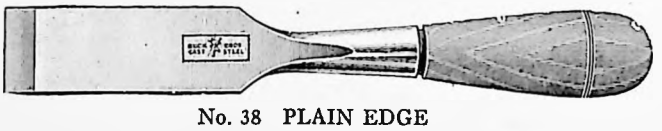
Size, Inches	1¼	1½	1¾	2
Per Dozen	$7.80	$9.40	$11.20	$13.10
Each	.72	.86	1.03	1.20

No. 4 BEVELED EDGE

Leather tipped, polished hickory handles. Sharpened ready for use, 9 inches long over all.

Size, Inches	1¼	1½	1¾	2
Per Dozen	$10.50	$11.90	$14.80	$16.70
Each	.96	1.09	1.36	1.53

Socket



No. 38 PLAIN EDGE

Length of blade, 3¾ inches. Sharpened ready for use.

Size, Inches..	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen...	$5.40	$5.40	$5.40	$5.62	$6.26	$6.70	$7.24	$7.78	$8.64	$9.40	$10.58	$11.77
Each	.50	.50	.50	.52	.58	.62	.67	.72	.80	.87	.98	1.09

No. 39 BEVELED EDGE

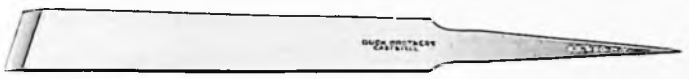
Length of blade, 3¾ inches. Sharpened ready for use.
Leather tipped, polished hickory handles.

Size, Inches..	⅛	¼	⅜	½	⅝	¾	⅞	1	1¼	1½	1¾	2
Per Dozen...	$7.56	$7.56	$7.56	$8.00	$8.64	$9.18	$9.61	$10.26	$11.66	$12.53	$14.80	$16.20
Each	.70	.70	.70	.74	.80	.85	.89	.95	1.08	1.16	1.37	1.50

Turning Tools for Wood

Chisels

Buck Bros.



Not Sharpened

No. 21 The 1-inch chisel is 11 inches long overall.
No. 23 Long and strong. The 1-inch chisel is 13 inches long overall.

No. 21

Size, Inches	¼	⅜	½	⅝	¾
Per Dozen	$5.51	$5.51	$5.94	$6.37	$7.13
Each	.51	.51	.55	.59	.66

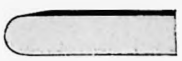
Size, Inches	1	1¼	1½	2
Per Dozen	$8.75	$10.58	$13.07	$18.25
Each	.81	.98	1.21	1.69

No. 23

Size, Inches	¼	⅜	½	⅝	¾
Per Dozen	$7.67	$7.67	$8.10	$8.64	$9.61
Each	.71	.71	.75	.80	.89

Size, Inches	⅞	1	1¼	1½	2
Per Dozen	$10.26	$12.80	$14.38	$18.68	$29.80
Each	.95	1.11	1.35	1.73	2.76

No. 19 SKEW POINT



No. 19¼
Round Point

No. 19½
Square Point

Best quality applewood handles, with cast brass ferrules. Sharpened ready for use. The 1-inch chisel has about 6¼-inch blade.

No. 19 Skew Point

Size, Inches	¼	⅜	½	⅝	¾	1
Per Dozen	$7.78	$7.78	$8.53	$9.15	$10.26	$12.96
Each	.72	.72	.79	.85	.95	1.20

No. 19¼ Round Point
No. 19½ Square Point

Size, Inches	¼	⅜	½	⅝	¾	⅞	1
Per Dozen	$8.86	$8.86	$9.72	$10.48	$11.45	$12.85	$14.15
Each	.82	.82	.90	.97	1.06	1.19	1.31

Turning Tools for Wood

Gouges

H. S. & Co.

Not Sharpened

No. 22 The 1-inch gouge is 11 inches long overall.
No. 24 Long and strong. The 1-inch gouge is 13 inches long overall.

No. 22

Size, Inches	¼	⅜	½	¾	1	1¼	1½	2
Per Dozen	$6.09	$6.83	$7.51	$9.10	$11.40	$14.35	$18.45	$25.96
Each	.56	.64	.69	.85	1.06	1.33	1.70	2.41

No. 24

Size, Inches	¼	⅜	½	⅝	¾	1	1¼	1½	1¾	2
Per Dozen	$10.69	$10.69	$12.42	$13.61	$15.55	$19.87	$23.98	$30.00	$33.37	$38.23
Each	.99	.99	1.15	1.26	1.44	1.84	2.22	2.78	3.09	3.54

No. 20

Best quality applewood handles, with cast brass ferrules. The 1-inch gouge has 6¼-inch blade. Sharpened ready for use.

Size, Inches	¼	⅜	½	⅝	¾	1	1¼
Per Dozen	$10.00	$10.00	$10.69	$11.34	$12.85	$16.10	$19.33
Each	.93	.93	.99	1.05	1.19	1.49	1.79

Hustler

Top View

Bottom View

Not Sharpened

Size, Inches	⅛	¼	⅜	⅜	½	⅝	¾	⅞	1
Each	$0.88	$0.88	$0.88	$0.88	$1.10	$1.33	$1.49	$1.69	$2.00

Turning Tools for Wood

Parting

Buck Bros.

ILLUSTRATION No. 18

Length, 8½ to 9½ inches over all. Not sharpened. Without handles.

Size, Inches	½	⅝	¾
Per dozen	$6.16	$6.80	$7.45
Each	.57	.63	.69

Sizing

Buck Bros.

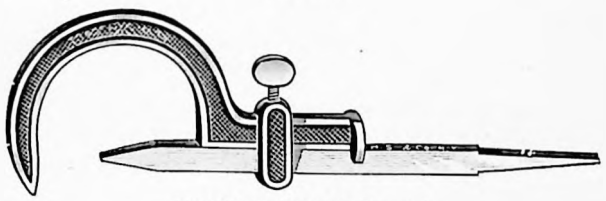
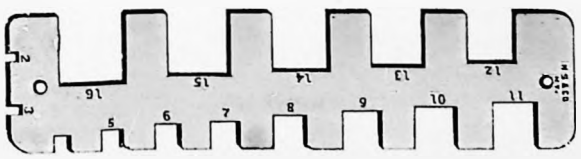


ILLUSTRATION No. 25

Opens to 4 inches. The blades are made of best English cast steel, properly tempered. Without handles, not sharpened.....Each, $2.00

Gauges

H. S. & Co.



Steel. Gauges from 2/16 to 16/16 by 16ths.....Each, $1.75

Carving Tools

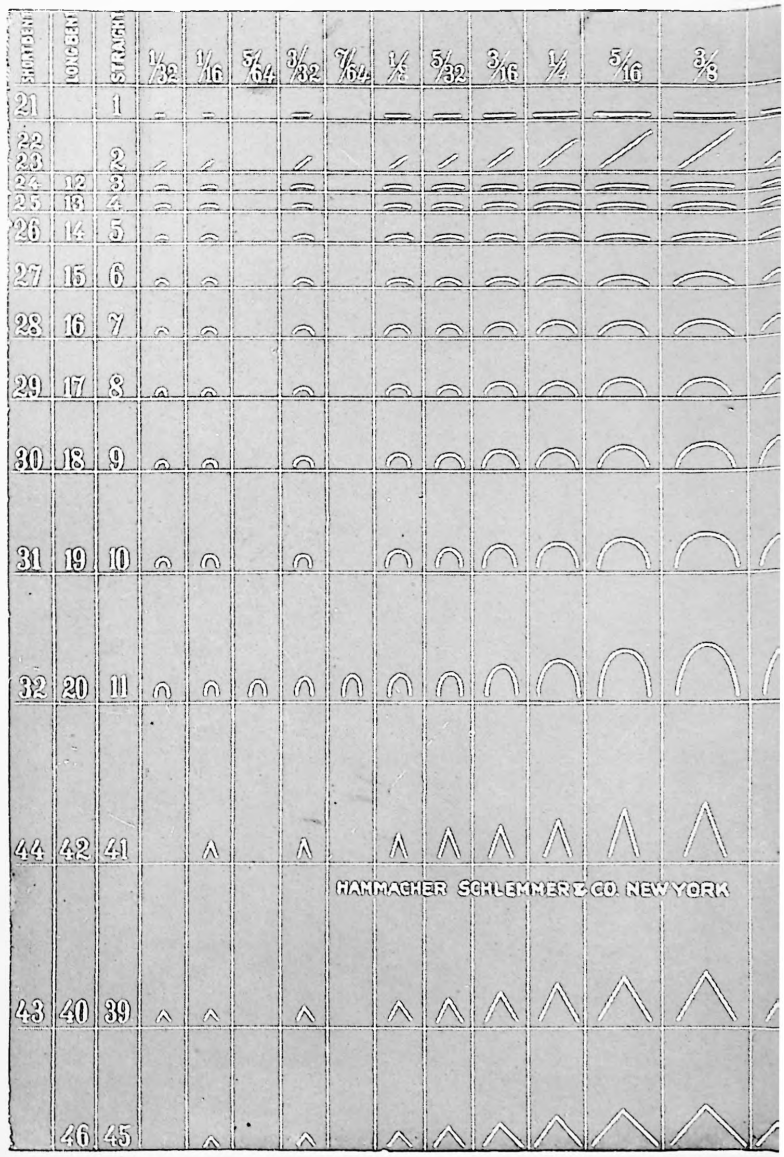
S. J. Addis, London

Not Handled or Sharpened

ILLUSTRATION SHOWS VEINING TOOL No. 11, 1/64 INCH

The S. J. Addis London Carving Tools are "Standard." Made of the best tool steel, carefully tempered, the sweeps are uniform, and each tool is thoroughly inspected to insure its being absolutely perfect. They are positively the best carving tools on the market.
We are agents and carry a large and assorted stock of the various sizes and sweeps.

	SIZE, INCHES											
UP TO	1/2	9/16	5/8	3/4	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	1 3/4	2
Nos. 1 and 2												
Per dozen	$3.80	$3.80	$3.80	$4.30	$5.10	$5.40	$6.50	$7.25	$7.90	$8.85	$10.80	$12.95
Each	.35	.35	.35	.40	.47	.50	.60	.67	.75	.82	1.00	1.20
Nos. 3 to 9												
Per dozen	4.30	4.30	4.30	5.20	5.85	6.15	7.55	8.55	9.20	10.35	12.65	15.45
Each	.40	.40	.40	.48	.54	.57	.70	.79	.85	.96	1.17	1.43
No. 10												
Per dozen	5.08	5.08	5.08	5.70	7.55	8.85	10.05	12.65	15.12	18.90	22.68	26.45
Each	.47	.47	.47	.53	.70	.82	.93	1.17	1.40	1.75	2.10	2.45
No. 11												
Per dozen	5.08	5.70	5.70	7.55	8.85	10.05	12.65	15.12	18.90	22.68	26.45	31.55
Each	.47	.53	.53	.70	.82	.93	1.17	1.40	1.75	2.10	2.45	2.92
Nos. 12 to 18												
Per dozen	5.40	5.40	5.40	5.95	8.20	9.50	11.35	12.65	15.10	17.60	.....	.....
Each	.50	.50	.50	.55	.76	.88	1.05	1.17	1.40	1.63	.....	.....
Nos. 19 to 20												
Per dozen	5.40	6.70	6.70	8.20	9.50	11.35	12.65	15.10	17.60	21.40	.....	.....
Each	.50	.62	.62	.76	.88	1.05	1.17	1.40	1.63	1.98	.....	.....
Nos. 21 to 23												
Per dozen	4.75	4.75	4.75	4.75	6.70	8.20	9.50	11.35	12.65	15.10	17.60	22.70
Each	.44	.44	.44	.44	.62	.76	.88	1.05	1.17	1.40	1.63	2.10
Nos. 24 to 30												
Per dozen	5.40	5.40	5.40	5.95	8.20	9.50	11.35	12.65	15.10	17.60	.....	.....
Each	.50	.50	.50	.55	.76	.88	1.05	1.17	1.40	1.63	.....	.....
Nos. 31 and 32												
Per dozen	5.40	6.70	6.70	8.20	9.50	11.35	12.65	15.10	17.60	21.40	.....	.....
Each	.50	.62	.62	.76	.88	1.05	1.17	1.40	1.63	1.98	.....	.....
No. 39												
Per dozen	6.70	7.55	8.20	10.25	12.95	16.20	....	....	....	....	.....	.....
Each	.62	.70	.76	.95	1.20	1.50	....	....	....	....	.....	.....
No. 40												
Per dozen	7.25	8.00	8.85	10.80	13.50	16.75	....	....	....	....	.....	.....
Each	.67	.74	.82	1.00	1.25	1.55	....	....	....	....	.....	.....
No. 41												
Per dozen	6.70	7.55	8.20	10.25	12.95	16.20	....	....	....	....	.....	.....
Each	.62	.70	.76	.95	1.20	1.50	....	....	....	....	.....	.....
No. 42												
Per dozen	7.25	8.00	8.85	10.80	13.50	16.75	....	....	....	....	.....	.....
Each	.67	.74	.82	1.00	1.25	1.55	....	....	....	....	.....	.....
Nos. 43 and 44												
Per dozen	7.25	8.00	8.85	10.80	13.50	16.75	....	....	....	....	.....	.....
Each	.67	.74	.82	1.00	1.25	1.55	....	....	....	....	.....	.....
No. 45												
Per dozen	6.70	7.55	8.20	10.25	12.95	16.20	....	....	....	....	.....	.....
Each	.62	.70	.76	.95	1.20	1.50	....	....	....	....	.....	.....


SHORT BENT
LONG BENT
STRAIGHT
1/32
1/16
5/64
3/32
7/64
1/8
5/32
3/16
1/4
5/16
3/8
21
22
23
24
25
26
27
28
29
30
31
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43
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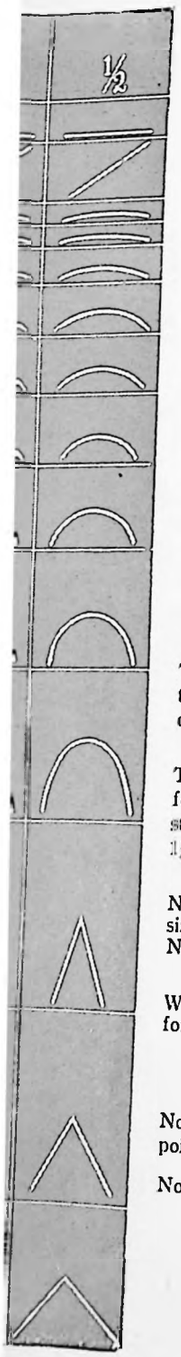
45
HAMMACHER SCHLEMMER & CO. NEW YORK



S. J. Addis' London Carving Tools

Long Bend

Straight

Short Bend

The illustrations of the sweeps in a few cases vary slightly from the tools, as it is almost impossible to have cuts made of the exact sweeps of some of the gouges, etc.

This illustrates the sweep of carving tools up to 1 inch, and will be found valuable in making up orders for these goods. We carry in stock: Tools Nos. 1 to 8, up to 1½ inch. Tools Nos. 9 to 20, up to 1¼ inch. Tools Nos. 21 to 45, up to 1 inch.

Nos. 1 to 11, and 20, 21, 31, 32, 39, 40, begin with $\frac{1}{32}$ inch. All other sizes begin with $\frac{1}{16}$ inch. $\frac{5}{32}$ and $\frac{7}{32}$ Tools are made in No. 11 only. No. 22 is right corner—No. 23 left.

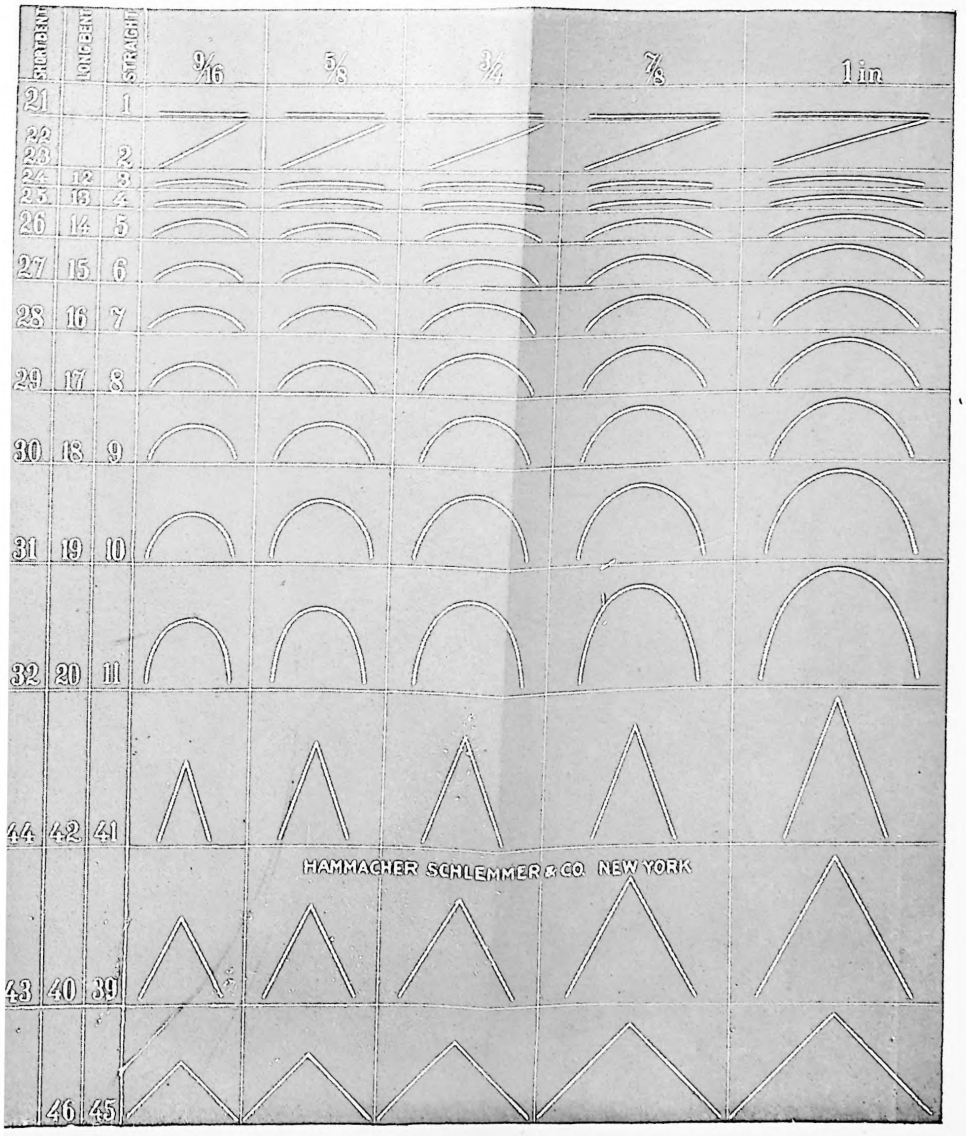
We also carry in stock a very fine, short veining tool, No. 11, $\frac{1}{64}$ inch for engraving varnished work. (Illustrated on page 98.)

How Carving Tools Are Measured

Nos. 1 to 32, width of cutting edge, measured in a straight line from point to point.

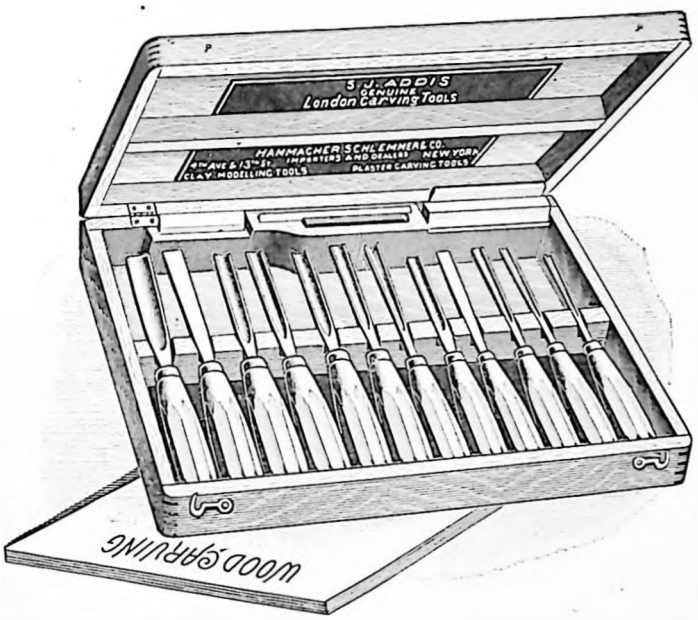
Nos. 41 to 46, length of one side of cutting edge.

For Outfits See Index


REGULAR
CONCENT
STRAIGHT
9/16
5/8
3/4
7/8
1 in
21
1
22
23
2
24
12
3
25
13
4
26
14
5
27
15
6
28
16
7
29
17
8
30
18
9
31
19
10
32
20
11
44
42
41
43
40
39
46
45
HAMMACHER SCHLEMMER & CO. NEW YORK

Carving Tools in Sets

S. J. Addis



Sets Nos. 11 and 12 contain 12 Handled and Sharpened (not honed) Carving Tools, in nicely finished oak case.

No. 1, ¼ and ½ inch; No. 3, ⅜ and ⅝ inch; No. 5, ¼ and ½ inch; No. 6, ¼ and ½ inch; No. 7, $\frac{1}{16}$ inch; No. 8, ¼ inch; No. 10, ⅛ inch; No. 45, ¼ inch.

1 Washita Oilstone, No. 26.
1 Washita Round-Edge Slip, No. 11.
1 Arkansas Triangular Stick, No. 20.
1 Special Arkansas Carving-Tool Slip, No. 15.
1 Carver's Marker, No. 8.
1 Illustrated Book of Instructions.

		Each
Set No. 11	With Round Maple Handles	$12.30
Set No. 12	With New Style Octagon Maple Handles	12.60

Set No. 11A Special, contains 12 Handled and Sharpened (not honed) Carving Tools. In nicely finished oak case.

No. 1, ¼, ⅜ and ½ inch; No. 2 $\frac{5}{16}$ inch; No. 3, ½ inch; No. 5, ¼ inch; No. 6, $\frac{1}{16}$ inch; No. 8, $\frac{1}{16}$ inch; No. 9, $\frac{1}{16}$ inch; No. 10, ⅛ inch; No. 11, $\frac{3}{16}$ inch; No. 41, $\frac{1}{16}$ inch.

1 Special Arkansas Slipstone, No. 15.
1 Arkansas Triangular Stick, No. 20.
1 Washita Oilstone, No. 26.
1 Washita Round-Edge Slip, No. 11.
1 Carver's Marker, No. 8.

Set No. 11A Special, with Round Maple Handles. Each $12.20

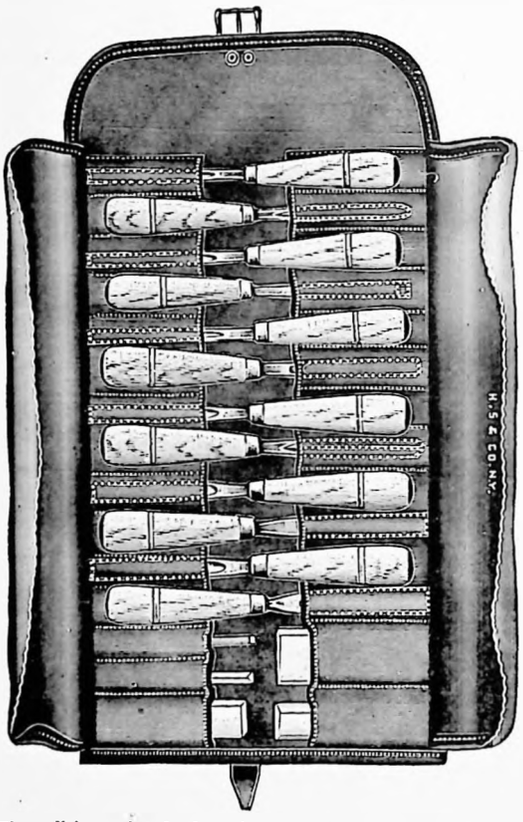
Sets Nos. 13 and 14 contain 6 Handled and Sharpened (not honed) Carving Tools, in nicely finished oak case.

No. 1, ⅜ inch; No. 3, ½ inch; No. 5, ¼ inch; No. 6, $\frac{1}{16}$ inch; No. 10, ⅛ inch; No. 45, ¼ inch.
1 Washita Oil Stone, No. 26.
1 Special Arkansas Carving Tool Slip, No. 15.
1 Carver's Marker, No. 8.
1 Illustrated Book of Instructions.

		Each
Set No. 13	With Round Maple Handles	$7.95
Set No. 14	With New Style Octagon Maple Handles	8.30

Carving Tools in Sets

S. J. Addis



No. 21-22
Carving Tools

No. 1—¼-½ inch.
No. 3—⅜-⅝ inch.
No. 5—¼-½ inch.
No. 6—¼-½ inch.
No. 7—$\frac{1}{16}$ inch.
No. 8—¼ inch.
No. 10—⅛ inch.
No. 45—¼ inch.

No. 26, No. 11, No. 20
No. 15—Oil Stones
No. 8—Carver's Marker Book of Instructions

No. 23-24
Carving Tools

No. 1—⅜ inch.
No. 3—½ inch.
No. 5—¼ inch.
No. 6—$\frac{1}{16}$ inch.
No. 10—⅛ inch.
No. 45—¼ inch.

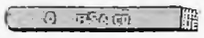
No. 26, No. 15
Oil Stones
No. 8—Carver's Marker Book of Instructions

The roll is made of selected canvas, leather edged, and a separate pocket is provided for each tool. This makes a very compact and convenient carrying case.

Set		Each
No. 21	Round Maple Handle	$9.80
No. 22	Octagon Maple Handle	10.10
No. 23	Round Maple Handle	7.50
No. 24	Octagon Maple Handle	7.85

Carvers' Markers

H. S. & Co.



No. 8

This marker is made of a special high-grade tool steel, gun finished, carefully hardened and tempered. Designed for background work in wood carving. Can furnish other styles upon request but they will be special.

Per dozen $3.24
Each ..... .30

Handling and Sharpening Carving Tools

Handling

(Prices include Handles)

With Round Maple Handle.

Per dozen $0.50
Each ..... .05

With Octagon Maple Handle.

Per dozen ..... .85
Each ..... .09

Sharpening

By sharpening, we mean that the tools are ground sharp, but not honed. Our experience has been that wood carvers prefer to do their own honing (which consists of putting on the inside bevel), as they differ in opinion as to the exact "edge" and bevel required.

Per dozen $0.90
Each ..... .10

Book

"Wood Carving, with Suggestions in Chip Carving"

By Thos. C. Simmonds

Contains many illustrations and full descriptions of the woods, tools, etc., used in wood and chip carving, with an entire chapter on the sharpening and care of tools.

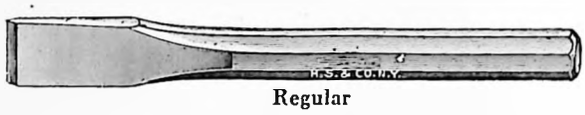
91 pages, 5½ x 7½ inches, postpaid..... Each, $0.65

Chisels

Cold

H. S. & Co.

Made from best tool steel for this purpose. Each tool carefully shaped, perfectly straight and well finished. Order by diameter of stock.



Regular

Diameter, inch	1/4	5/16	3/8	1/2	5/8	3/4	1
Length, inches	4	4 1/2	5	5 3/4	6 1/2	7 1/2	8
Cutting edge, inches	5/32	3/8	7/16	5/8	3/4	7/8	1 1/8
Per dozen	$1.84	$2.05	$2.16	$2.80	$3.78	$6.15	$10.60
Each	.17	.19	.20	.26	.35	.57	.98

Extra Long

Diameter, inch	3/4	3/4
Length, inches	12	18
Per dozen	$8.64	$12.95
Each	.80	1.20

Cape

No. 6

Diameter, inch	1/4	5/16	3/8	1/2	5/8	3/4
Length, inches	4	4 1/2	5	6	7	7 1/2
Cutting edge, inches	5/32	7/16	9/32	5/16	3/8	7/16
Per dozen	$2.15	$2.38	$2.60	$3.35	$5.20	$7.35
Each	.20	.22	.24	.31	.48	.68

Chisels

Floor

H. S. & Co.

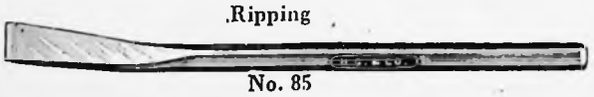
No. 60

Made thin to cut flooring, etc. Must not be used for prying or ripping, as the No. 85 is intended for that purpose.

2 1/2 inches wide, 18 inches long. Made of 3/4-inch octagon steel.

No. 60 Per dozen $12.20
Each 1.13

Ripping



No. 85

Intended for ripping down partitions and similar rough work and can be subjected to very hard usage. 1 1/2 inches wide, 18 inches long. Made of 3/4-inch octagon steel.

No. 85 Each $1.05

Box Opener

Morrill

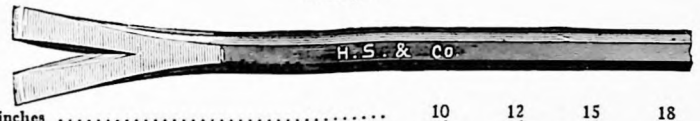
Will open the largest cases and pull out the longest nails. It may be used as a claw bar, box chisel, strap cutter, nail puller or hammer.

Length overall 14 inches, weight 1¼ pounds.....Each, $1.50

Box Chisels

H. S. & Co.

Octagon



Length, inches	10	12	15	18	21
Diameter, inch	¾	¾	¾	¾	¾
Per dozen	$9.50	$9.83	$11.25	$12.95	$13.82
Each	.88	.91	1.04	1.20	1.28

Round

	Per Dozen	Each
Round. 16-inch japanned steel	$13.18	$1.22

Crate Openers

ILLUSTRATION No. 403

Forged from one piece of solid steel. Blued finish with polished claw. Hammer head doubles its usefulness. Length overall 6¾ inches. Weight 8 ounces.

No. 403 Each $0.80

Noxtox

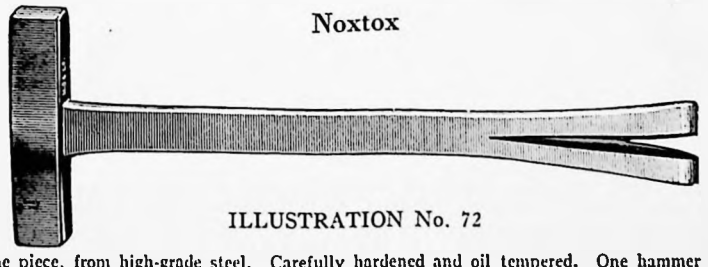


ILLUSTRATION No. 72

Forged in one piece, from high-grade steel. Carefully hardened and oil tempered. One hammer head, plain; one scored. Black finish, polished claw. Weight 14 ounces. Length overall 9 inches.

	Per Dozen	Each
No. 72	$7.88	$0.73

Pinch Bars

H. S. & Co.

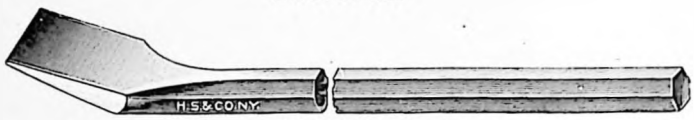


ILLUSTRATION No. 30

Made of Tool Steel

Diameter, inches	5/8	3/4	7/8
Length, inches	24	30	36
Each	$0.80	$1.35	$2.00

Can furnish pointed on handle end at same price.

Ripping Bar

with Bent Claw

H. S. & Co.

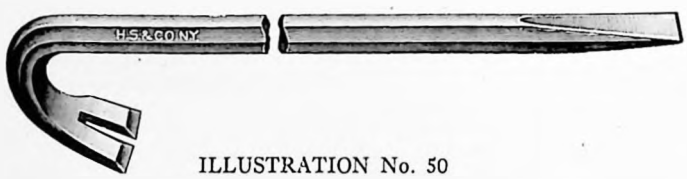


ILLUSTRATION No. 50

Made of Tool Steel.
Known also as Goose-neck Bar.

	Per Dozen	Each
30 inches long, 3/4-inch in diameter	$11.50	$1.15

Nail Puller

Morrill

ILLUSTRATION No. 1

The jaws and shank are drop-forged, of high-grade steel specially finished to prevent rust. The ram is best quality cast iron, finely japanned. The handle and hand guard on shank make it impossible to bruise or pinch the hand. The shank is centrally mounted within the foot instead of the usual lap or lay joint. This keeps the jaws from spreading sidewise and gives the tool long life.

Each $2.80

Oil Stones

Artificial

Carborundum

Carborundum stones are superior to any other stones for rapid cutting qualities, may be used dry, or with water or oil; are quite porous, and may be tempered in their cutting by filling with wax or vaseline.

They are always sharp, clean and bright, never fill or glaze, and are made in three grades, as follows:

Fine (FF) For procuring a very smooth, keen edge on tools of hard steel, etc.

Medium (180) For sharpening tools quickly, where an extremely keen edge is not necessary.

Coarse (120) To sharpen very dull and large tools, which may later be finished with a fine stone, or in cases where a fine finish is not required.

India

India Sharpening Stones are made from Alundum. They possess the characteristics of hardness, sharpness and toughness, as well as absolute uniformity. They cut rapidly and are especially adaptable to the quick sharpening of all kinds of machinists' tools, made of modern tool steels, such as scrapers, taps, reamers, milling cutters, lathe and planer tools.

On account of its ability to hold its shape, the India Stone is almost indispensable in shoe shops for sharpening channel knives. heel and various other special machine and hand tools. It is also most efficient and economical for use in engraving plants and for die workers and instrument makers.

All India Stones are oil filled by a patented process. This feature insures a moist, oily sharpening surface with the use of only a small quantity of oil. It also insures a good cutting surface by preventing the stone from filling with particles of steel.

India Stones are made in three grades or grits, as follows:

Coarse: For sharpening large and very dull or nicked tools, machine knives, and for general use where fast cutting is required without regard to fine finish.

Medium: For ordinary sharpening of mechanics' tools not requiring finishing edge. Especially recommended for tools used in working soft woods, cloth, leather and rubber.

Fine: For machinists and engravers, die workers, instrument workers, cabinet makers and all users of tools requiring a very fine, keen edge.

Natural

Washita

Washita stone is found in the Ozark Mountains in Arkansas, and is composed of nearly pure silica, very similar to the Arkansas, but much more porous. It is known throughout the world as the best natural stone for sharpening carpenters' and general woodworkers' tools.

Its sharpening qualities are due to small, sharp pointed grains or crystals, hexagonal in shape and much harder than steel. It is found in various grades, from perfectly crystalized and porous grit to vitreous flint and hard sandstone. The sharpness of grit depends entirely upon its crystallization. The best oilstones are made from very porous crystals.

Those listed on the succeeding pages were correctly quarried and carefully graded, and are fully warranted.
Lily White Washita is the best selection or grading of natural Washita, perfectly white in color, uniform in texture and nicely finished.

Rosy Red Washita has an even porous grit, somewhat coarser than the Lily White grading, and is therefore faster cutting.

No. 1 Washita is a good oilstone for general use, where a medium-priced stone is wanted. It is far superior to the many cheap so-called "oil stones" on the market, that are only sandstones with a polished face, but it is not as uniform as the Lily White.

Arkansas

Due to its capacity of imparting the highest perfection to the cutting edge, the Arkansas Oilstone is the abrasive used for sharpening instruments of surgeons, histologists, vivisectionists, students of anatomy and biology, and all others who perform the most delicate operations or prepare minute specimens for microscopic work.

The skilled engraver of gold, silver, copper and other metals, the watchmaker, the dentist, the cutler, and all other users and makers of fine tools, use this natural stone, exclusively, for sharpening.

Genuine Arkansas Stone is composed of pure silica crystals, microscopic in size, and silica is among the hardest of known minerals. So hard and perfectly crystallized is the Arkansas Stone that it is nearly sixteen times harder to cut than marble, as the hardest of steel tools with the finest points or blades may be sharpened on the Arkansas Stone without grooving.

Arkansas Stone is prepared for commercial purposes in two grades, hard and soft.

Hard Arkansas is much harder than steel and will therefore cut away and sharpen steel tools. The extreme fineness of texture makes it a slow cutter, but a perfect sharpener.

Soft Arkansas is not quite so fine grained and hard as the Hard Arkansas, but it cuts faster and is better for carvers, file makers, pattern makers and for all workers in hard wood.

Oil Stones

Carborundum

Regular

Number	Length, Inches	Width, Inches	Thickness, Inches	Number of Carborundum	Each
116	8	2	1	180 (medium)	$1.40
122	6	2	1	180 (medium)	1.00
143	4	1¾	½	180 (medium)	.60

Combination

These stones are designed especially for carpenters and mechanics.

They are made with one face of coarse and one face of very fine grit. The coarse side can be used for sharpening dull tools; the fine side to bring the required keen, sharp edge.

Made in Four Sizes

		Each
No. 108	8 x 2 x 1 inch	$1.80
No. 109	6 x 2 x 1 inch	1.40
No. 111	5 x 2 x ¾ inch	1.08
No. 112	4 x 1¾ x ⅝ inch	.80

Combination Round Bench

The round Combination Bench Stone No. 107 is made to meet the sharpening needs of the carpenter and general mechanic. It is a novel as well as a decidedly practical addition to the tool box. The stone is made in the round form so as to allow for the circular motion required in sharpening chisels and similar tools.

The stone is made with one side coarse grit for taking out nicks and bringing the tool to an edge and the other side of a very fine grit for giving the keen finished edge.

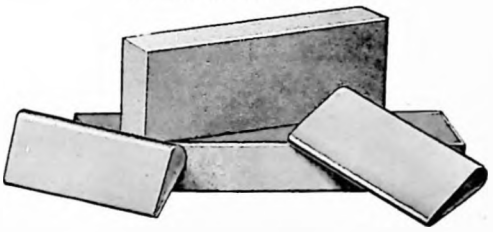
	Each
No. 107 4 inches diameter, 1 inch thick	$1.60
Quartered-oak box for No. 107	.40

Superior to any other stones for rapid-cutting qualities. Used dry or with water or oil. Are quite porous, and may be tempered in their cutting by filling with vaseline.
For description see page 105.

Oil Stones

Carborundum

(Miscellaneous Shapes)



These carborundum stones are particularly adapted to sharpening tools used in the manual training schools. The manual training school stones include the rectangular sharpening stones for chisels, plane bits, etc., and two sizes of slip stones for touching up gouges, chisels, etc. Each stone cuts fast and clean; doesn't fill or glaze, and it will show long life.

Slips

Are made in four sizes and three different grits of each size. These slip stones cut rapidly and retain their shape perfectly.

		Each
No. 175	6 x 2¼ x ¾—⅜ inch—180 (medium)	$1.00
No. 178	4½ x 1¾ x ¼—$\frac{1}{16}$ inch (medium)	.60
No. 181	4½ x 2⅛ x $\frac{5}{8}$—$\frac{5}{16}$ inch—180 (medium)	.80

Pocket Hones—Carborundum

Very useful for sharpening the penknife or ink scratcher.

No. 149 3 x ⅞ x ⅜ inch (fine), without case ..... Each $0.20

Sticks

Carborundum

Length		4 Inches		
Symbol for Length and Grit		AB		C
		Medium and Fine		
No.	Shape	Size, Inches	Per Dozen	Each
1	Sq.	¼	$4.32	$0.40
2	Tri.	¼	5.62	.52
3	½ Rd.	¼	5.62	.52
4	Rd.	¼	6.05	.56
5	Sq.	⅜	4.32	.40
6	Tri.	⅜	5.62	.52
7	½ Rd.	⅜	5.62	.52
8	Rd.	⅜	6.05	.56
9	Sq.	½	4.32	.40
10	Tri.	½	5.62	.52
11	½ Rd.	½	5.62	.52
12	Rd.	½	6.05	.56
13	Sq.	⅝	4.75	.44
14	Tri.	⅝	6.05	.56
15	½ Rd.	⅝	6.05	.56
16	Rd.	⅝	6.48	.60

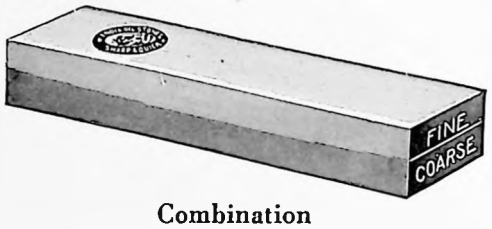
For description, see page 105.

Oil Stones

India

Medium or Fine

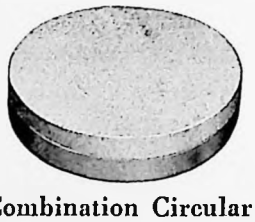
No.	Dimensions, Inches	Per Dozen	Each
0	8 x 2 x 1	$16.20	$1.50
1	8 x 1¾ x 1¼	18.36	1.70
1½	7 x 2 x 1	13.82	1.25
2	6 x 1⅝ x ¾	9.18	.85
3	4 x 1 x ½	5.50	.51
24	4½ x 1½ x ⅝	6.90	.64
29	6 x 2 x 1	11.45	1.06



Combination

Possess the advantage of having two stones in one, the coarse side being used for grinding down very dull or badly nicked tools and the fine side for putting on a finishing edge. India Combination Stones are not two separate stones glued together, but are in reality single stones, the two grits being vitrified together, so that no amount of throwing about or ill-usage will cause them to come apart.

No.	Dimensions, Inches	Per Dozen	Each
0	8 x 2 x 1	$20.52	$1.90
1½	7 x 2 x 1	18.36	1.70
2	6 x 1⅝ x ¾	12.31	1.14
29	6 x 2 x 1	16.20	1.50



Combination Circular

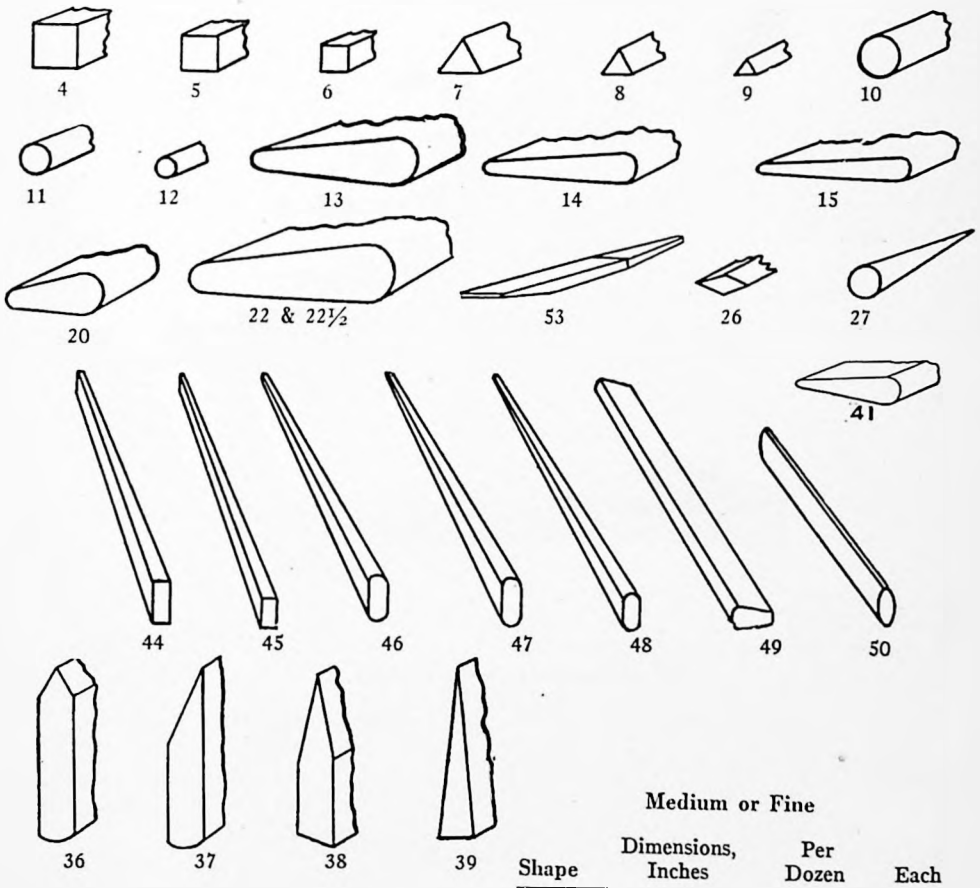
A practical and economical shape for mechanics who require tools with perfectly straight edges. Especially desirable for those who prefer that broad rotary stroke, as the danger of hollowing out is entirely eliminated. 4 inches diameter.

No. 63 Per dozen $18.36
Each 1.70

For description, see page 105.

Oil Stones

India (Miscellaneous Shapes)



Medium or Fine

Shape	Dimensions, Inches	Per Dozen	Each
4	4 x ½ x ½	$4.64	$0.43
5	4 x ⅜ x ⅜	4.64	.43
6	4 x ¼ x ¼	4.64	.43
7	4 x ½ x ½	5.94	.55
8	4 x ⅜ x ⅜	5.94	.55
9	4 x ¼ x ¼	5.94	.55
10	4 x ½	6.48	.60
11	4 x ⅜	6.48	.60
12	4 x ¼	6.48	.60
13	4½ x 1¾ x ½ x 1/16	6.90	.64
14	4½ x 1¾ x ⅜ x ⅛	6.90	.64
15	4½ x 1¾ x ¼ x 3/16	6.90	.64
20	4 x 1 x 7/16 x 5/16	5.94	.55
22	4½ x 2⅛ x 5/8 x 5/16	9.18	.85

For description, see page 105.

Medium or Fine

Shape	Dimensions, Inches	Per Dozen	Each
22½	6 x 2¼ x ¾ x ⅜	$11.45	$1.06
26	4 x 1/16 x 3/16	8.32	.77
27	Point 3 x 5/16	8.32	.77
36, 37, 38, 39	1 Set (4) Carvers Slips 2¼ x ⅞ x 3/16		Per Set $1.70
41	5 x 1 x 1/16 x 3/32	6.48	.60
44	4 x ½ x ¼ x 5/16 x ⅛	7.78	.72
45	4 x 1/16 x 3/16 x 5/16 x 3/16	7.78	.72
46	4 x ½ x ¼ x 3/16 x ⅛	7.78	.72
47	4 x ½ x 3/16 x 1/16 x 1/16	7.78	.72
48	4 x ⅜ x 3/16 x ⅛ x 1/16	7.78	.72
49	4 x 7/16 x 3/16 x ⅛	7.78	.72
50	3½ x 7/16 x 3/16	7.78	.72
53	Automobile Stone	5.94	.55

Oil Stones

Arkansas, No. 1 Quality

Unmounted	Each
6x1¾x ¾-inch, Regular	$4.10
6x1¾x ¾-inch, Soft	1.65
8x2 x1 -inch, Regular	6.75
8x2 x1 -inch, Soft	3.00

In Mahogany Case—Mounted	Each
6x2-inch, Regular	$2.80
6x2-inch, Soft	1.40
8x2-inch, Regular	3.80

Washita

Rosy Red—Unmounted	Per Dozen	Each
6x1¾x ¾-inch	$6.90	$0.64
8x2 x 1-inch	11.25	1.04

Rosy Red—In Cherry Case—Mounted	Per Dozen	Each
6x2-inch	$8.42	$0.78
8x2-inch	14.05	1.30

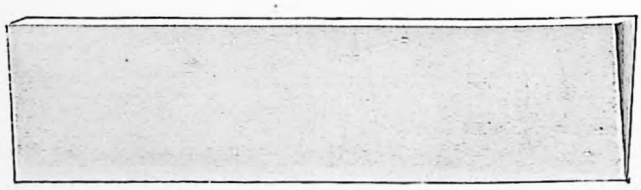
Lily White—Unmounted	Per Dozen	Each
Soft, 8x2x1-inch	$11.23	$1.04

Penknife Pieces

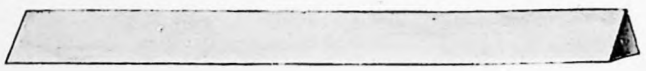
Arkansas	Per Dozen	Each
No. 16 3½x¾x⅜-inch	$4.32	$0.40
No. 17 4x1x½-inch	6.48	.60
No. 18 5x1x½-inch	10.80	1.00

Washita	Per Dozen	Each
No. 26 3⅞x1x½-inch	$1.84	$0.17

Miscellaneous Arkansas Sticks

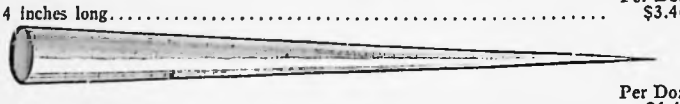


	Per Dozen	Each
No. 19 Knife Blade, 4 inches long	$5.60	$0.52



	Per Dozen	Each
No. 20 Triangular, 4½ inches long	$4.00	$0.40

	Per Dozen	Each
No. 21 Square, 4 inches long	$3.46	$0.32



	Per Dozen	Each
No. 22 Points, 2¾ inches long	$6.48	$0.60

For description, see page 105.

Oil Stones

Round Edge Slips

Arkansas (Regular)

		Per Dozen	Each
No. 1	3½ x 1 x 3/16 to 1/8 inch	$4.32	$0.40
No. 2	3½ x 1⅜ x ¼ to 3/32 inch	6.05	.56
No. 3	3½ x 1½ x 1/16 to ⅛ inch	7.56	.70
No. 4	4 x 2 x 1/16 to 3/16 inch	21.96	1.20
No. 5	4½ x 2 x 1/16 to ¼ inch	15.88	1.47

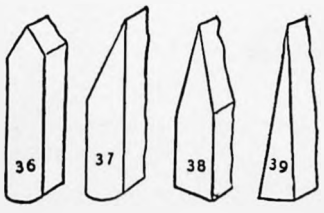
Soft Arkansas

		Per Dozen	Each
No. 6	3½ x 1 x 3/16 to 1/8 inch	$3.02	$0.28
No. 7	3½ x 1⅜ x ¼ to 3/32 inch	3.78	.35
No. 8	3½ x 1½ x 1/16 to ⅛ inch	5.40	.50
No. 9	4 x 2 x 1/16 to 3/16 inch	6.05	.56
No. 10	4½ x 2 x 1/16 to ¼ inch	8.64	.80

Rosy Red Washita

		Per Dozen	Each
No. 11	3½ x 1½ x 1/16 to ⅛ inch	$1.84	$0.17
No. 12	4 x 2 x 1/16 to 3/16 inch	2.60	.24
No. 13	4½ x 2 x 1/16 to ¼ inch	3.24	.30
No. 14	5 x 2½ x ¾ to 1/16 inch	6.05	.56

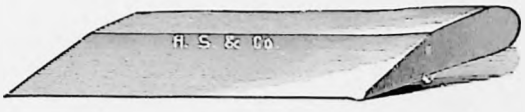
Carving Tool Sets



Arkansas, set of 4 ..... $1.28

Soft or hard. Soft sent unless otherwise specified.

Special Carving Tool Slip



Soft Arkansas

		Per Dozen	Each
No. 15	2 7/16 x 1 x ¼ inch	$2.92	$0.27

For description, see page 105.

Oil Stone Boxes

For India Stones

Iron

ı four cork feet which will prevent sliding on the bench. The stone rests on a t which absorbs surplus oil, and keeps the stone moist and ready for instant use.

as follows:

8 x 2 x 1 inches — 6 x 1⅝ x ¾ inches
7 x 2 x 1 inches — 6 x 2 x 1 inches

.....$7.00
..... .65

Steel

1 Stones: Each
.iameter, 1-inch thick..... $0.65

For Carborundum Stones

Wooden

ell seasoned quartered oak with lock corners. Base is made with a shoulder so will set down tight. Boxes are highly polished and well made in every respect.

Each
r stones 8 x 2 x 1 inches, box without stone.....$0.40
r stones 6 x 2 x 1 inches, box without stone..... .40

Iron

Each
inches..... $1.00

Sharpening Stones

Scythe

Carborundum Niagara

ıes must not be classed with the ordinary scythe stones. The old style stones are ıdstone and are of very little use. They simply rub the edge into shape while um cuts it fast and clean.

10 inches long.....Each $0.32

Lectro

ial from which the Lectro stone is made is the product of the electric furnace. s of manufacture leaves it strong, though porous, exposing myriads of hard, tough, ted crystals, making the cutting properties of this stone unexcelled.

.....$1.60
..... .15

Willoughby Lake

y in color; round oval in shape. Has very sharp grit but gives fine edge.

.....$1.30
..... .12

Above prices are subject to change without notice

Oil

Pike Stone Oil

Pike Oil is perfectly pure, acidless, and non-drying. It will not gum, nor will it corrode the most highly polished metal. It is an oil that can be recommended with greatest safety for all purposes where a thin, pure oil is required as a lubricant or rust preventative. It is also used with a high degree of success for cleaning and polishing all kinds of wood and metal surfaces.

	Per Dozen	Each
Two-ounce bottles	$2.40	$0.20
Six-ounce bottles	4.20	.35
Six-ounce cans	4.20	.35

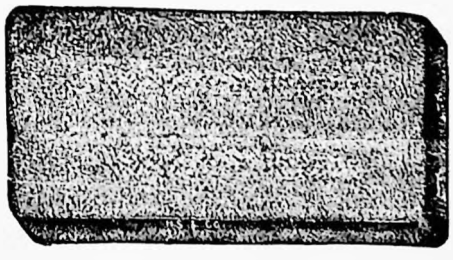
"Three in One"

A light body oil, pure in composition; cleans and polishes veneered and enameled surfaces. A scientific rust preventer, will not cake or harden and is not affected by temperature changes. Useful for magnetos, timers and for oiling auto springs. Put up in bottles and in handy pocket-fitting cans.

	Per Dozen	Each
Small size bottle, containing 1 ounce	$1.40	$0.15
Large size bottle, containing 3 ounces	2.75	.30
Factory size bottle, containing 8 ounces	5.35	.60
Handy oil can, containing 3½ ounces	2.75	.30

Steel Polish

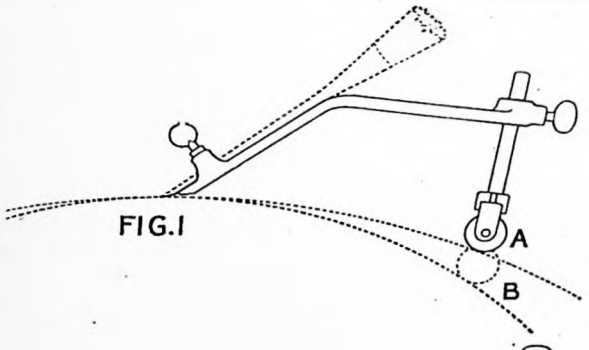
H. S. & Co.

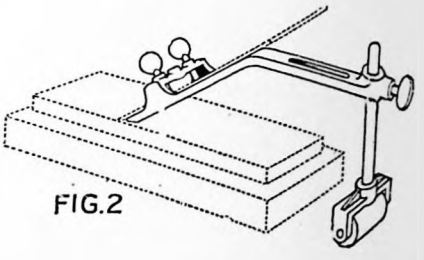


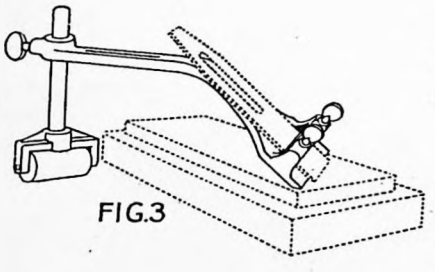
		Per Dozen	Each
No. 1045	For removing rust from steel. Used as an ordinary rubber eraser	$0.76	$0.07

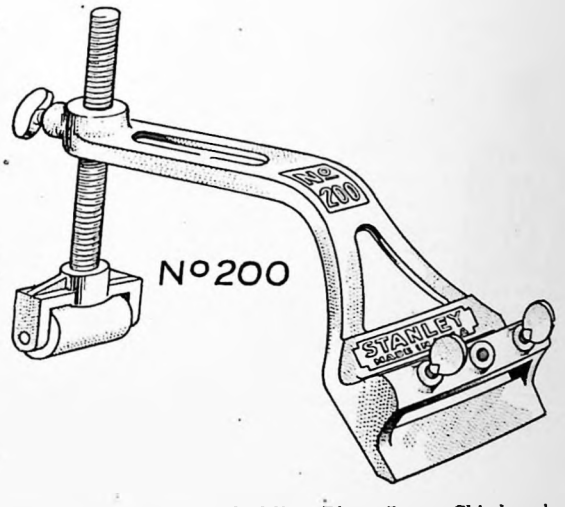
Grinder Guide for Plane Cutters and Chisels

Stanley









The Stanley Cutter and Chisel Grinder Guide is a device for holding Plane Irons, Chisels and other similar cutting tools that they may be ground or honed to any desired angle or bevel, insuring an accuracy that is very difficult to obtain when the tool is held in the hand.

The tool to be sharpened is rigidly held in the Grinder by thumb screws, and may be given any desired angle by means of the large screw attached to the roller frame, which raises or lowers the main body.

As shown in the cut, the Grinder is fitted with two thumb screws and three thumb-screw holes. By the use of two thumb screws, the tool to be ground is held much more firmly than is possible with the use of a single screw.

The thumb screws are placed in the two outer holes when wide cutters are to be held. For narrow cutters the middle hole and one of the outer holes may be used.

In grinding, the Roller, and beveled edge of the tool to be sharpened, are held against the face of the grindstone as in Fig. 1, "A" indicating the position of the Roller. "B" indicates the position of the Roller on a stone of smaller diameter, both positions giving the same bevel to the tool being sharpened.

In honing, the Roller does not come in contact with the oil stone but acts as a rear support. (See Fig. 2.)

By turning the Roller at an angle to the main body (see Fig. 3), the user will be able to obtain the slanting stroke so commonly used when tools are sharpened without a holder.

The Sharpener is made entirely of metal, all parts being nickel-plated.

No. 200 Each $1.20

Corundum Wheels

Corundum is the hardest and sharpest mineral known except the Diamond. The precious gems, Ruby, Sapphire and Oriental Emerald, are perfectly crystallized, highly colored varieties of Corundum.

Corundum is not only harder than any other mineral available for abrasive purposes, but it is possessed of great toughness and breaks with sharp, jagged edges, thus giving it great durability and wonderful cutting power.

One corundum wheel properly made and graded for its work will do more work than two emery wheels, and do it faster and better. It is necessary to state, however, that since the superiority of corundum has become better known, many wheels have been put out as "Corundum Wheels" which in reality contained but little, if any, real corundum. The user of abrasive wheels should be on his guard against forming a wrong opinion of corundum wheels from this cause. Our Corundum Wheels are made only of pure Corundum, the best obtainable, cleaned and graded with especial care for our use.

When ordering state character of grinding.

Diameter, Inches	Thickness, Inches.	Diameter, Hole, Inches	Grit	Each
1½	⅜	¼	60-100	
2	⅜	¼	60-100	$0.32
2	½	¼	60-100	
2½	⅜	⅜	60-100	
2½	⅜	½	60-100	
2½	½	⅜	60-100	.43
2½	½	½	60-100	
3	¼	⅜	60-100	
3	¼	½	60-100	.43
3	⅜	⅜	60-100	
3	⅜	½	60-100	
3	½	⅜	60-100	.43
3	½	½	60-100	
3½	¼	⅜	60-100	
3½	¼	½	60-100	.48
3½	⅜	⅜	60-100	
3½	⅜	½	60-100	
3½	½	⅜	60-100	.60
3½	½	½	60-100	
4	⅜	⅜	46-100	
4	⅜	½	46-100	
4	⅜	¾	46-100	.60
4	½	⅜	46-100	
4	½	½	46-100	
4	½	¾	46-100	

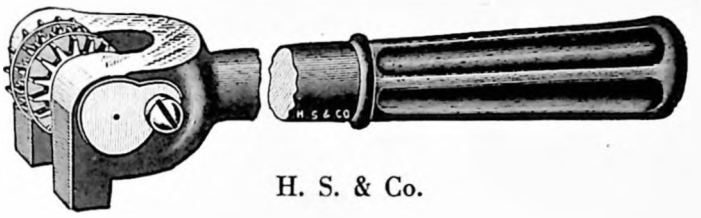
Above prices are subject to change without notice

Corundum Wheels

Diameter, Inches	Thickness, Inches.	Diameter, Hole, Inches	Grit	Each
4	5/8	3/8	40-100	$.70
4	5/8	1/2	40-100	
4	5/8	3/4	40-100	
4	3/4	3/8	40-100	
4	3/4	1/2	40-100	
4	3/4	3/4		
4	1		40-100	.84
4	1	3/8	40-100	
4	1	1/2	40-100	
4	1	3/4		
4	1		40-100	.82
5	3/8	3/8	40-100	
5	3/8	1/2	40-100	
5	1/2	1/2		.97
5	1/2		46-100	.97
5	1/2	3/4	46-100	.97
5	3/4	3/8	46-100	.97
5	3/4	1/2	46-100	1.15
5	3/4	3/4	46-100	1.15
5	3/4	1	46-100	1.15
5	1	1/2	46-100	
5	1	3/4		1.03
5	1		46-100	1.03
5	1	1/2	46-100	1.03
6	3/8	3/4	46-100	1.03
6	3/8	1/2	46-100	1.25
6	1/2	3/4	46-100	1.25
6	1/2	1/2	46-100	1.45
6	3/4	3/4	46-100	1.45
6	3/4	1/2	46-100	
6	1	3/4		1.25
6	1		40-90	1.25
6	1	3/4	40-90	1.55
7	1/2	1	40-90	1.55
7	1/2	3/4	40-90	1.85
7	3/4	1	40-90	1.85
7	3/4	3/4	40-90	1.52
7	1	1	40-90	1.52
7	1	3/4	40-90	1.88
7	1/2	1	40-90	1.88
8	1/2	3/4	40-90	2.22
8	3/4	1	40-90	2.22
8	3/4	3/4	40-90	2.95
8	1	1	40-90	2.95
8	1	3/4	40-90	
8	1 1/2	1	40-90	2.70
8	1 1/2	3/4	40-90	
8	1	1		2.10
9	1		40-80	2.10
9		3/4	40-80	2.10
	1/2	1	40-80	2.65
10	1/2	1 1/4	40-80	2.65
10	1/2	3/4	40-80	2.65
10	3/4	1	40-80	3.20
10	3/4	1 1/4	40-80	3.20
10	3/4	3/4	40-80	3.20
10	1	1	40-80	4.35
10	1	1 1/4	40-80	4.35
10	1	3/4	40-80	4.35
10	1 1/2	1	40-80	4.07
10	1 1/2	1 1/4	40-80	4.07
10	1 1/2	1	40-80	5.60
10	1	1 1/4	40-80	5.60
12	1	1	40-80	
12	1 1/2	1 1/4		
12	1 1/2			
12				

Above prices are subject to change without notice

Grinding Wheel Dressers



H. S. & Co.

Huntington Pattern

Users of Grinding Wheels will find this Dresser a great help in shaping wheels, and in many instances a practical substitute for the more expensive and delicate diamond tool.

Including two sets of Cutters, $1\frac{3}{16}$ inches in diameter.....Each, $0.54

Extra Cutters

In the manufacture of these Cutters, they undergo a special tempering process which renders them capable of resisting great wear and insures safety when used on emery wheels at full speed.

	Per Dozen Sets	Per Set
Huntington (not bushed)	$0.75	$0.07
Paragon (bushed)	1.08	.10

Sherman

Each Cutter having a different corrugation which prevents them from nesting and gives it a different cutting edge. The cutters always remain sharp, as the corrugated face remains the same until worn down almost to the spindle, thus giving far greater cutting surface to the dresser than is possibly obtainable with the notched cutter such as the Huntington type. The washers between which these cutters revolve prevent the sides of the handle from wearing.

No. 1.....Each,	$1.00
Cutters, 3 in set, $1\frac{1}{2}$ inches in diameter.....Set,	.17
No. 2.....Each,	2.23
Cutters, 4 in set, $2\frac{3}{8}$ inches in diameter.....Set,	.35

Diamo-Carbon

Is a steel tube filled its entire length with an abrasive mixture hard enough to dress grinding wheels. An adjustable brass collar is so placed as to form a backstop over the tool rest.

The dresser is extremely hard, wears away slowly, and with proper care will last indefinitely. Delicate wheels can be formed in any shape desired without breaking the edges.

	Each
No. 3 Dresser, 10 inches long, $\frac{5}{8}$-inch diameter.....	$3.70
No. 5 Dresser, 12 inches long, $\frac{5}{8}$-inch diameter.....	4.20

Polishing Heads

M. F. Co.

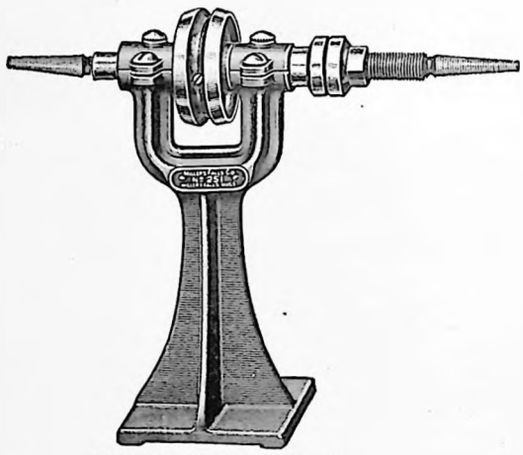


ILLUSTRATION No. 21

This tool is built on correct principles and is made to take polishing, buffing and grinding wheels of a wide range of diameters and thicknesses. The tapered ends of spindle are for holding felt or other cloth buffing wheels. Solid iron frame, japanned black; steel pulleys with sides painted red; adjustable bearings with adjustable screws and oil caps of brass; other parts polished. Spindle tapered on either end; flanges for wheels adjustable from 0 to 7/8 inch and locked by hexagon nut. Pulley grooved for 1/4-inch round belt or 3/4-inch face may be used for flat belt. Height to center of spindle, 6 inches; diameter of spindle, 7/16 inch; diameter of pulley, 1 1/8 inches; weight, 2 1/4 pounds.

No. 21 Each $1.75

No. 22 In all respects as No. 21, but heavier. Diameter of spindle, 1/2 inch; diameter of pulley, 2 1/4 inches; weight, 3 1/4 pounds.

No. 22 Each $2.50

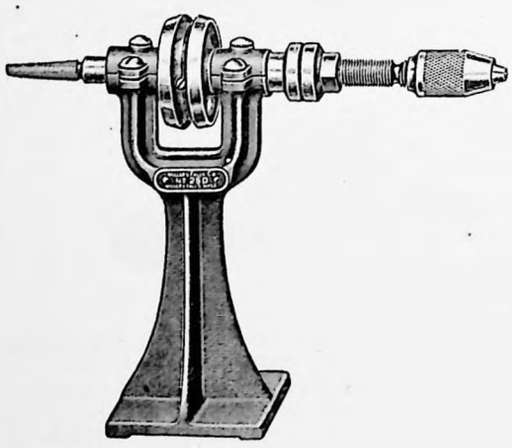


ILLUSTRATION No. 23

No. 23

Built along the same lines as No. 21, but with nickeled Star chuck added with capacity 0 to 7/16 inch round shanks. Jaws of chuck are actuated by springs that are protected from injury and will not get out of order. Weight, 2 1/2 pounds.

No. 23 Each $2.15

No. 24 Same as No. 23, but is provided with star chuck to hold round shank drills from 0 to 1/4 inch in diameter. Weight, 3 lbs., 10 ounces.

No. 24 Each $3.40

Polishing Head

M. F. Co.

No. 25

This tool is made to take polishing and grinding wheels of wide range in diameters and thicknesses. Spindle is made to take a polishing or grinding wheel on either end, the flanges of wheels being adjustable from 0 to ¼ inch and locked by hexagon nut. Pulley is grooved for ¼-inch round belt and has a ¾-inch face that may be used for flat belt. Has adjustable bearings with adjustable screws and oil caps of brass. Frame is of solid iron japanned black; pulley with polished face and sides painted red. Height to center of spindle, 6 inches; diameter of spindle, ½ inch; diameter of pulley, 2 inches. Weight, 4 pounds.

No. 25 Each $3.00

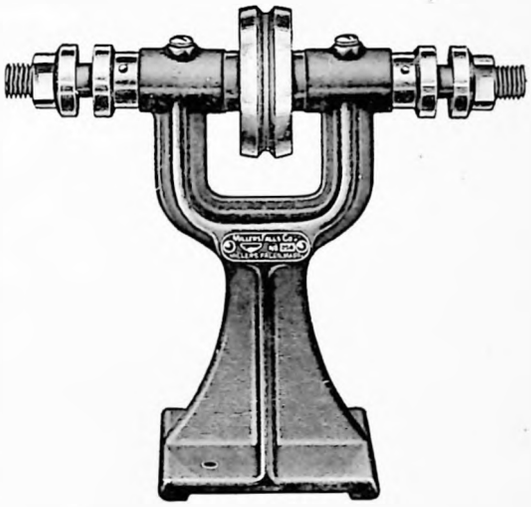


ILLUSTRATION No. 25

Bench Grinder

Athol

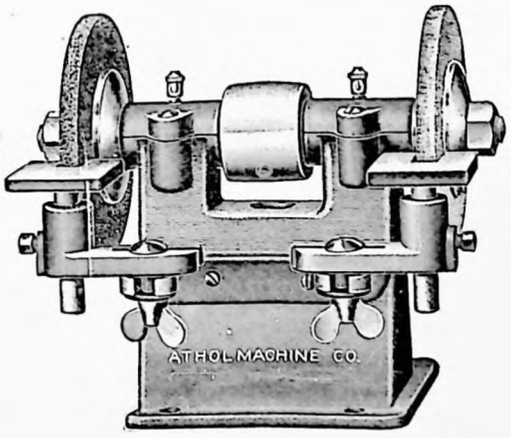


ILLUSTRATION No. 159

An indispensable tool for grinding drills, reamers, counterbores and miscellaneous small tools as well as for rough grinding of small machine parts, castings and forgings. Equipped with adjustable rests for grinding pieces alike. Drive pulley grooved for round belt so it can be driven by motor. All parts painted or polished. Equipped with patent oil cups for bearings. Size of base, 6 x 5 inches. Length of spindle, 9⅝ inches. Height to center of spindle, 5⅝ inches. Total height, 7 inches. Distance between wheels, 6⅝ inches. Diameter of flanges, 2¾ inches. Pulley 2 inches in diameter, 1⅝-inch face. Weight, 13 pounds.

No. 159 Without emery wheels. Each.....$9.35

Tool Grinders

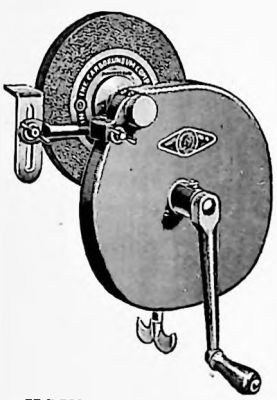


ILLUSTRATION No. 4

Carborundum Niagara

These grinders cannot be excelled for general utility. All parts carefully made, perfectly fitted. Gear case of best grey iron, the two sections being ground to a fit, make the case absolutely oil tight. Gears, all accurately cut, run smoothly—without noise. Handle and thumb-screw clamp made of malleable iron. All small parts heavily nickel plated. Every machine fitted with a Carborundum wheel, the fastest, coolest cutting of all wheels for general grinding purposes. Twist drill attachments can be supplied with No. 3 and 4 Grinders, also Foot Power appliance, shown below. No. 4 Grinder is made similar to Nos. 1, 2 and 3, but of heavier material, for use in large machine shops, garages and construction work.

Nos.		Diameter, Wheel Inches	Thickness, Wheel Inches	Weight, Packed, lbs.	Each
1		4	1	10	$4.60
2		5	1	11½	6.00
3		6	1	14½	7.60
4		7½	1¼	26	11.20
20	Foot-power Attachment for No. 3 Grinder				2.40
21	Foot-power Attachment for No. 4 Grinder				2.40
23	Twist Drill Attachment for Nos. 3 and 4 Grinders				2.80

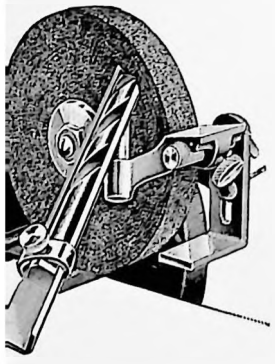


ILLUSTRATION No. 23
Twist Drill Attachment, for Nos. 3 and 4 Grinders

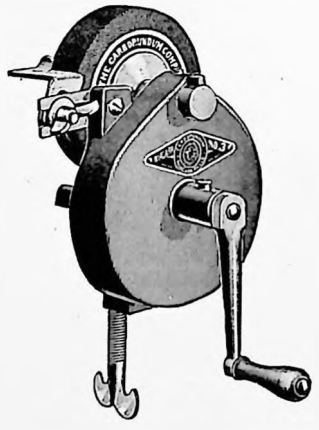
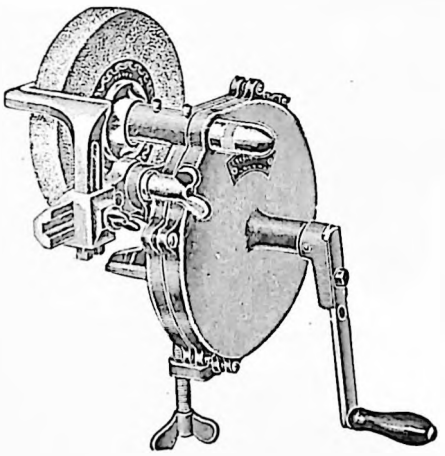


ILLUSTRATION
Nos. 1, 2 and 3 Grinders

ILLUSTRATIONS
Nos. 20 and 21.
Foot Power Attachment, for Nos. 3 and 4 Grinders

Above prices are subject to change without notice



Tool Grinders

Liberty

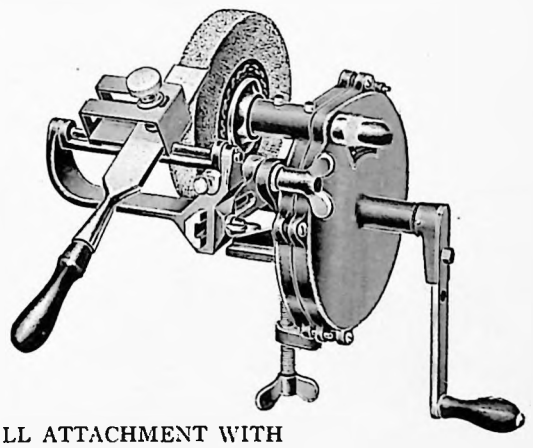
The highest development in hand or foot power grinders. Constructed along most modern lines, each part thoroughly tested and accurately fitted together, insuring strength and smoothness in running. Bronze bearings. Recommended for machine or repair shops, garages and Industrial Training Schools. A corundum grinding wheel furnished with every grinder, medium grit.

Diameter, Wheel, Inches	Thickness, Wheel, Inches	Weight, Grinder, Pounds	Each
8	1¼	38	$12.60

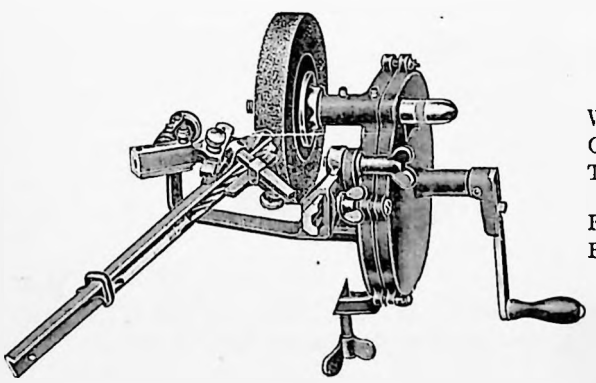
Attachments for Liberty Grinder

CHISEL ATTACHMENT

This grinder can be fitted with chisel, flat bit, sickle, wheel dresser or foot power attachments. A micrometer feed regulator can also be used with the twist drill attachment and insures accurate grinding of both lips of drill to the same exact point.



TWIST DRILL ATTACHMENT WITH MICROMETER FEED REGULATOR



	Each
Wheel dresser attachment	$2.10
Chisel attachment	3.50
Twist drill attachment with micrometer feed regulator	10.50
Flat bit attachment	7.00
Foot power attachment (see preceding page for illustration)	3.50

Tool Grinders

Pike

Whirlwind Hand Power

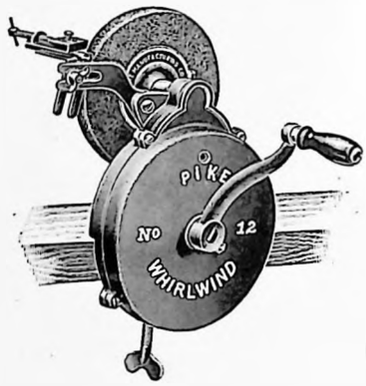


ILLUSTRATION No. 12

This Grinder will do heavy, hard, accurate and quick grinding on railway construction work, quarrying, mining, contracting, building and kindred trades.

Height, 13½ inches; diameter of gear case, 9 inches; net weight, 24 pounds; gross weight, 28 pounds. Size of box, 16 x 10¾ x 7¼ inches.

No. 12 Each $20.80

Foot-Power Attachment

For either Nos. 8, 9, 12.....Each, $2.20
In ordering, state for which machine attachment is desired.

Polishing or Buffing Outfit

Each
For attachment to No. 8 or No. 9 Grinder, see Page 123....$1.80
In ordering, state for which machine attachment is desired.

Tool Grinders

Pike

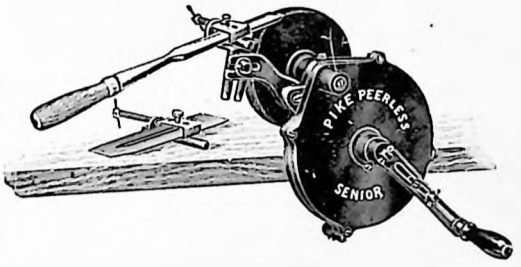


ILLUSTRATION No. 9

Peerless Senior Hand Power

Equipment

Pike Patented Tool Rest combining chisel holder, twist-drill guide and scissors guide.

Extension crank handle, adjustable to any length, making easy work of the most awkward grinding job.

One medium grit corundum wheel, 6 x 1¼ inches, furnished with each grinder.

Polishing outfit and foot power when ordered.

Crystolon wheels can be supplied if desired.

Height, 13 inches; length, 12½ inches; diameter of gear case, 9 inches; net weight, 15 pounds; gross weight, 20 pounds; cases, 14 x 11 x 7 inches.

	Each
No. 9 Green enamel finish	$12.80
Polishing outfit, see Page 122, extra	1.80

Peerless Junior Hand Power, No. 8

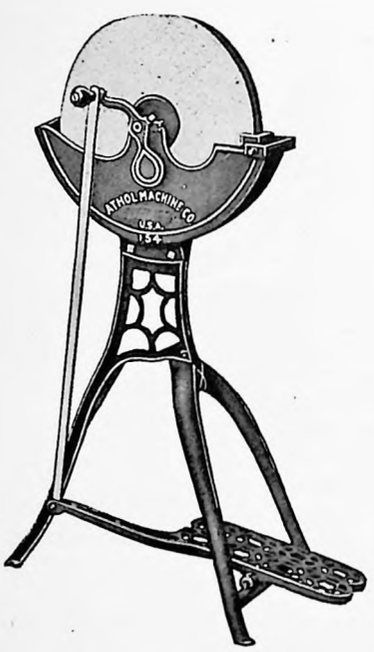
Construction and equipment same as Senior model but smaller in size, with grinding wheel 5 x 1 inches.

Height, 10½ inches; length, 7 inches; diameter of gear case, 6 inches; net weight, 7 pounds; gross weight, 11 pounds; cases, 11 x 9 x 7 inches.

	Each
No. 8 Green enamel finish	$8.80
Polishing outfit, see Page 122, extra	1.80

Foot Power Grindstones

Athol

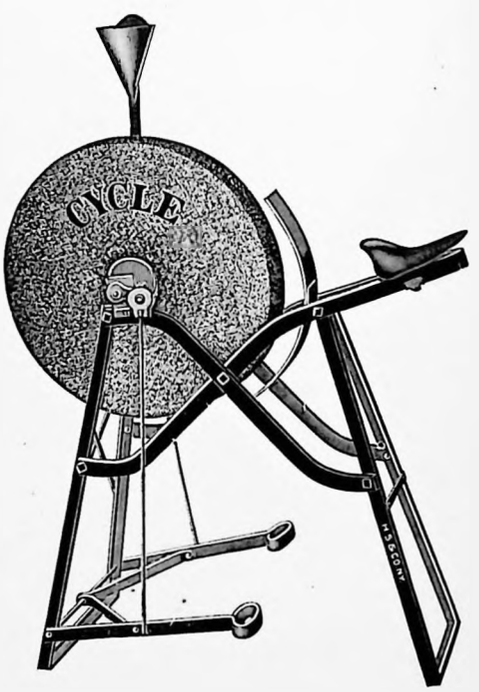


No. 154

This grindstone is especially adapted for grinding small tools used by jewelers, amateur mechanics, etc., as well as for household purposes. The stone, 14 inches x 1¼ inches, is carefully selected of the proper grit to do the work intended. Weight, 60 pounds. Height, over all, 36 inches.

No. 154 Each $13.15

Cycle, Ball-bearing

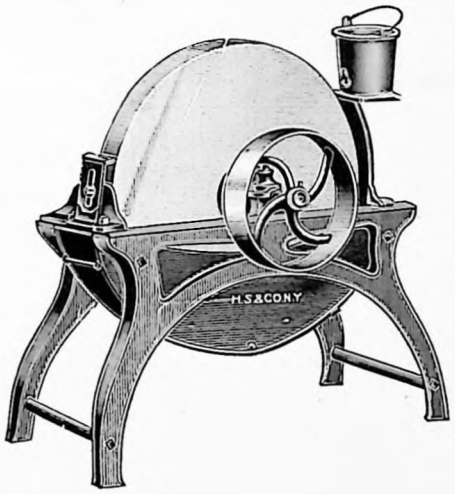


Stones 19 to 22 inches, 2 to 2¼ inches thick. Best quality Berea grit. Front and rear legs, each formed of one piece heavy steel angle. Upper frame is constructed to form a brace for legs, making a most rigid frame. Weight, 85 pounds.

No. 300 Each.....$7.20

Iron Frame Grindstones

Hoppen



The frame of the Hoppen Grindstone is designed like a pyramid with all the weight hung central and low—no material overhanging floor bearing. This insures safe transportation, as there is no chance of the stone tipping under the roughest handling.
All drippings drain into trough.
The stone is firmly held by powerful flanges and nuts on a shaft that is turned from a steel bar and hung true.
It spins lightly on self-oiling, self-aligning journals; thus little power is required.
The foot-power frame has swivel treadle for right or left foot.

Number		Size Stone, Inches	With Stone, Each	Without Stone, Each
10A	Frame with Pulley	24 x 2½	$34.25	$28.00
10B	Frame with Treadle	24 x 2½	34.25	28.00
10C	Frame with Treadle and Pulley	24 x 2½	38.25	32.10
11	Frame with Pulley	24 x 3	36.60	28.00
12	Frame with Pulley	27 x 3½	58.35	45.90
13	Frame with Pulley	30 x 4	64.60	50.30
14	Frame with Pulley	36 x 5	110.60	85.10

Shield, Pan and Bucket with Faucet, for Nos. 10 and 11	3.25
Shield, Pan and Bucket with Faucet, for No. 12	5.10
Shield, Pan and Bucket with Faucet, for No. 13	5.25
Shield, Pan and Bucket with Faucet, for No. 14	7.25
Hand Crank, for No. 10 or 11	1.40

Twist Drills

Carbon

No. 340

Wire Sizes

Number by Gauge	Decimals of 1 Inch	Approximate Length, Inches	Twist Cut, Inches	Per Dozen	Each
1	.2280	4	2 31/32	$1.38	$0.14
2	.2210	3 15/16	2 5/8	1.38	.14
3	.2130	3 15/16	2 5/8	1.38	.14
4	.2090	3 7/8	2 1/2	1.38	.14
5	.2055	3 13/16	2 9/16	1.25	.13
6	.2040	3 13/16	2 17/32	1.25	.13
7	.2010	3 3/4	2 1/2	1.25	.13
8	.1990	3 11/16	2 15/32	1.25	.13
9	.1960	3 11/16	2 7/16	1.25	.13
10	.1935	3 5/8	2 3/8	1.13	.11
11	.1910	3 9/16	2 13/32	1.13	.11
12	.1890	3 9/16	2 5/16	1.13	.11
13	.1850	3 1/2	2 9/32	1.13	.11
14	.1820	3 7/16	2 1/4	1.13	.11
15	.1800	3 7/16	2 7/32	1.00	.10
16	.1770	3 3/8	2 3/16	1.00	.10
17	.1730	3 5/16	2 5/32	1.00	.10
18	.1695	3 5/16	2 1/8	1.00	.10
19	.1660	3 1/4	2 3/32	1.00	.10
20	.1610	3 3/16	2 1/16	.95	.09
21	.1590	3 3/16	2 1/16	.95	.09
22	.1570	3 1/8	2	.95	.09
23	.1540	3 1/16	1 31/32	.95	.09
24	.1520	3 1/16	1 15/16	.95	.09
25	.1495	3	1 29/32	.90	.09
26	.1470	2 15/16	1 7/8	.90	.09
27	.1440	2 15/16	1 27/32	.90	.09
28	.1405	2 7/8	1 13/16	.90	.09
29	.1360	2 13/16	1 3/4	.90	.09
30	.1285	2 13/16	1 23/32	.90	.09
31	.1200	2 3/4	1 11/16	.88	.09
32	.1160	2 11/16	1 5/8	.88	.09
33	.1130	2 11/16	1 5/8	.88	.09
34	.1110	2 5/8	1 9/16	.88	.09
35	.1100	2 9/16	1 1/2	.88	.09
36	.1065	2 9/16	1 1/2	.88	.09
37	.1040	2 1/2	1 7/16	.88	.09
38	.1015	2 7/16	1 3/8	.88	.09
39	.0995	2 7/16	1 23/32	.88	.09
40	.0980	2 3/8	1 11/32	.88	.09

Above prices are subject to change without notice

Twist Drills

Carbon

No. 340

Wire Sizes

Number by Gauge	Decimals of 1 Inch	Approximate Length, Inches	Twist Cut, Inches	Per Dozen	Each
41	.0960	2 5/16	1 5/16	$0.85	$0.09
42	.0935	2 5/16	1 1/4	.85	.09
43	.0890	2 1/4	1 3/16	.85	.09
44	.0860	2 3/16	1 3/16	.85	.09
45	.0820	2 3/16	1 1/8	.85	.09
46	.0810	2 1/8	1 1/8	.83	.08
47	.0785	2 1/16	1 1/16	.83	.08
48	.0760	2 1/16	1 1/16	.83	.08
49	.073	2	1	.83	.08
50	.070	1 15/16	31/32	.83	.08
51	.0670	1 15/16	15/16	.80	.08
52	.0635	1 7/8	7/8	.80	.08
53	.0595	1 13/16	27/32	.80	.08
54	.0550	1 13/16	27/32	.80	.08
55	.0520	1 3/4	13/16	.80	.08
56	.0465	1 11/16	25/32	.78	.08
57	.0430	1 11/16	25/32	.78	.08
58	.0420	1 5/8	25/32	.78	.08
59	.0410	1 9/16	11/16	.78	.08
60	.0400	1 9/16	11/16	.78	.08
61	.0390	1 1/2	5/8	.75	.08
62	.0380	1 1/2	5/8	.75	.08
63	.0370	1 1/2	5/8	.75	.08
64	.0360	1 1/2	5/8	.75	.08
65	.0350	1 1/2	5/8	.75	.08
66	.0330	1 1/2	9/16	.75	.08
67	.0320	1 7/16	9/16	.75	.08
68	.0310	1 7/16	9/16	.75	.08
69	.0292	1 3/8	9/16	.75	.08
70	.0280	1 5/16	9/16	.75	.08
71	.0260	1 5/16	1/2	.75	.08
72	.0250	1 1/4	7/16	.75	.08
73	.0240	1 3/16	3/8	.75	.08
74	.0225	1 1/8	7/16	.75	.08
75	.0210	1 1/16	1/4	.75	.08
76	.0200	1	1/4	.75	.08
77	.0180	15/16	9/32	.75	.08
78	.0160	7/8	9/32	.75	.08
79	.0145	13/16	9/32	.75	.08
80	.0135	3/4	9/32	.75	.08

Twist Drills

Carbon

No. 330

Jobbers' Lengths

Diameter, Inches	Whole Length, Inches	Twist Cut, Inches	Decimal Equivalent	Per Dozen	Each
1/64	1 7/16	1/16	.0312	$0.75	$0.08
3/64	1 11/16	5/32	.0468	.78	.08
1/16	2 1/2	1 1/4	.0625	.80	.08
5/64	2 5/8	1 3/8	.0781	.83	.08
3/32	2 3/4	1 1/2	.0937	.85	.09
7/64	2 7/8	1 11/16	.1093	.88	.09
1/8	3	1 13/16	.125	.90	.09
9/64	3 1/8	1 15/16	.1406	.93	.09
5/32	3 1/4	2 3/32	.1562	.95	.10
11/64	3 3/8	2 7/32	.1718	1.00	.10
3/16	3 1/2	2 5/16	.1875	1.13	.11
13/64	3 5/8	2 7/16	.2031	1.25	.13
7/32	3 3/4	2 17/32	.2187	1.38	.14
15/64	3 7/8	2 21/32	.2343	1.50	.15
1/4	4	2 3/4	.25	1.63	.16
17/64	4 1/8	2 7/8	.2656	1.75	.18
9/32	4 1/4	2 31/32	.2812	1.90	.19
19/64	4 3/8	3 3/32	.2968	2.00	.20
5/16	4 1/2	3 5/16	.3125	2.18	.22
21/64	4 5/8	3 7/16	.3281	2.35	.24
11/32	4 3/4	3 13/32	.3437	2.53	.25
23/64	4 7/8	3 17/32	.3593	2.75	.28
3/8	5	3 5/8	.375	3.00	.30
25/64	5 1/8	3 3/4	.3906	3.25	.33
13/32	5 1/4	3 27/32	.4062	3.50	.35
27/64	5 3/8	3 31/32	.4218	3.88	.39
7/16	5 1/2	4 1/16	.4375	4.25	.43
29/64	5 5/8	4 1/16	.4531	4.63	.46
15/32	5 3/4	4 9/32	.4687	5.00	.50
31/64	5 7/8	4 13/32	.4843	5.50	.55
1/2	6	4 1/2	.5	6.00	.60

Flat Drills

Carbon, for Metal or Tile

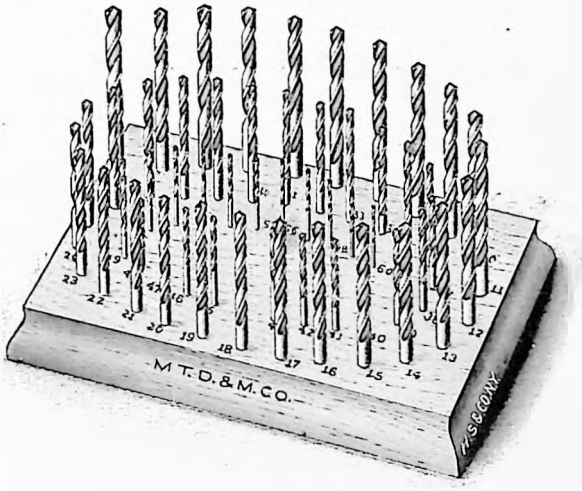
For Brace

Size, inches	1/16	1/4	5/16	3/8	7/16	1/2	5/8
Per dozen	$1.85	$1.85	$1.85	$1.85	$1.95	$2.15	$2.60
Each	.17	.17	.17	.17	.18	.20	.24

Above prices are subject to change without notice

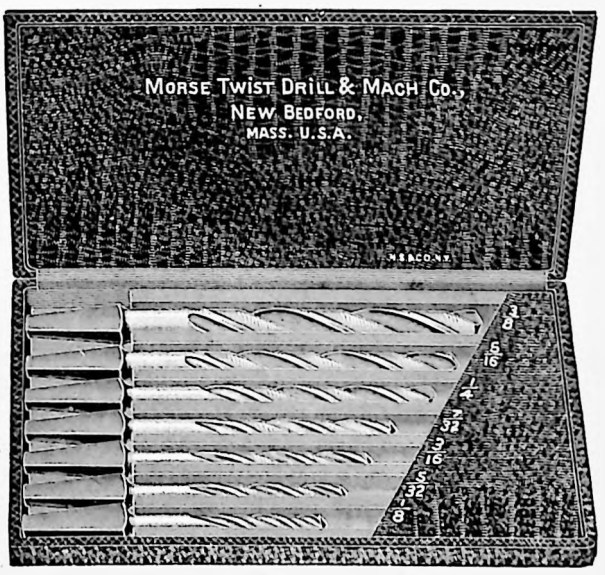
Sets of Drills

Morse Straight Shank in Wooden Blocks



	Mounted as Shown	Per Set
No. 5	Set Drills, Straight Shanks, 1/8 to 1/2 inch, by 64ths, Style No. 330	$6.75
No. 6	Set Drills, Straight Shanks, 1/8 to 1/2 inch, by 32nds, Style No. 330	4.00
No. 8	Set Drills, Wire Drill Gauge, from No. 1 to 60, Style No. 340	6.25
No. 9	Half Set Drills, alternate numbers from 1 to 59, Style No. 340	3.50

Morse Bit Stock in Leatherette Cases

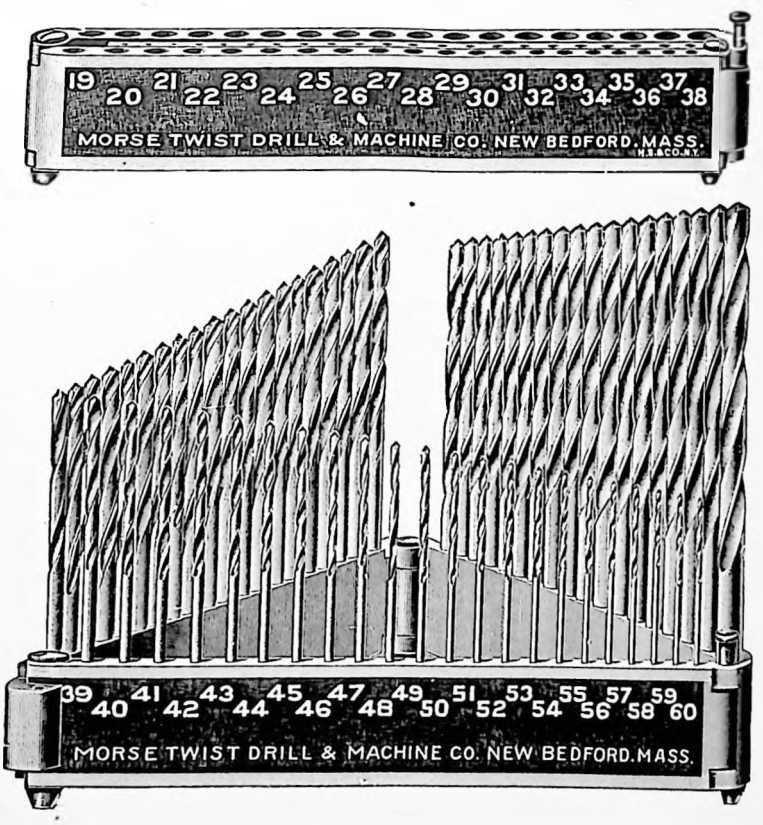


		Per Set
No. 25	Bit Stock Drills, Style No. 391, 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 5/16, 11/32, 3/8 inch	$2.28

Sets of Drills

Morse Straight Shank

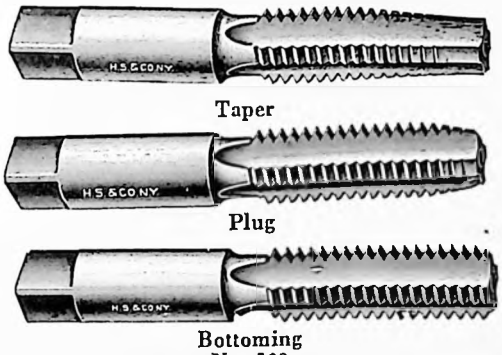
In Folding or Portable Holders



		Per Set
No. 5 B	Set Drills, Straight Shanks, 1/8 to 1/2 inch, by 64ths, Style No. 330.....	$7.50
No. 8 B	Set Drills, Wire Drill Gauge, from No. 1 to 60, Style No. 340.....	7.00

Hand Taps

S. W. Card



Taper

Plug

Bottoming
No. 103

Diameter, Inches	Prices on U. S. Standard Thread Only: Per Set	Prices on U. S. Standard Thread Only: Each	Total Length, Inches	Number of Threads to Inch: U. S. Standard	Other Threads Also Furnished: V Form	Other Threads Also Furnished: Whitworth Standard	Other Threads Also Furnished: U. S. Standard	Other Threads Also Furnished: V Form
1/4	$0.87	$0.29	2 1/2	20	20	20	24, 27, 28, 32	24, 27, 32
5/16	.93	.31	2 3/32	18	18	18	20, 24, 27, 32	20, 24, 27, 32
3/8	1.05	.35	2 15/16	16	16	16	18, 20, 24, 27	14, 18, 20, 24, 27
7/16	1.26	.42	3 5/32	14	14	14	20, 24, 27	12, 16, 20, 24, 27
1/2	1.50	.50	3 3/8	13	12	12	12, 20, 24, 27	13, 14, 16, 20, 24, 27
9/16	1.68	.56	3 1/2	12	12	12	18, 27	14, 27
5/8	1.89	.63	3 13/16	11	11	11	12, 18, 27	10, 12, 20, 24, 27
3/4	2.70	.90	4 1/4	10	10	10	12, 16, 27	12, 20, 27
7/8	3.60	1.20	4 11/16	9	9	9	12, 14, 18, 27	10, 12, 27
1	4.50	1.50	5 1/8	8	8	8	12, 14, 27	12, 27

Left-hand taps are special.

V threads and Whitworth threads take special prices

S. A. E. Standard (Society Automobile Engineers) or A. L. A. M. Standard

A set consists of, one each, taper, plug and bottoming.

Diameter of Tap, Inches	Per Set	Each	Number of Threads to Inch	Whole Length, Inches
1/4	$0.86	$0.29	28	2 1/2
5/16	.95	.31	24	2 3/32
3/8	1.05	.35	24	2 15/16
7/16	1.25	.42	20	3 5/32
1/2	1.47	.50	20	3 3/8
9/16	1.68	.56	18	3 1/2
5/8	1.90	.63	18	3 13/16
11/16	2.35	.80	16	4 3/32
3/4	2.70	.90	16	4 1/4

These Taps are made to conform to the standard adopted by the Society of Automobile Engineers. The form of thread is the same as the U. S. Standard, but the pitch is made finer, to meet the requirements of automobile builders.

Machine Screw Taps

S. W. Card

A. S. M. E. Standard

We recommend the adoption of this standard.

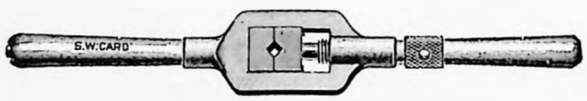
Screw Gauge No.	PRICE		NUMBER OF THREADS TO THE INCH	
	Per Dozen	Each	Standard	Also Furnished
1	$2.85	$0.27	72	56, 64
2	2.57	.24	64	56
3	2.28	.21	56	48
4	2.28	.21	48	32, 36, 40
5	2.00	.18	44	36, 40
6	2.00	.18	40	32, 36
8	2.00	.18	36	30, 32, 40
9	2.00	.18	32	24, 30
10	2.28	.19	30	24, 28, 32
12	2.57	.24	28	24, 32
14	3.08	.29	24	20
16	3.08	.29	22	18, 20
18	3.42	.31	20	18
20	3.42	.31	20	16, 18

When so ordered, the taps will be furnished in sets of taper, plug and bottoming, like hand taps.

Plug taps furnished unless otherwise specified.

Left-hand taps, sizes, lengths and threads not listed, are subject to special prices.

Wrenches for Taps, Reamers or Drills



Card No. 206 Adjustable

Nos.	Length, Inches	Holding Taps	Each
0	5	1/16 to 3/16	$1.45
1	7½	⅛ to ⅜	1.90
1½	9½	3/16 to ½	2.85
2	12	¼ to ⅝	3.35
3	14	½ to ¾	3.80

Card No. 208 Horsfield Patent Adjustable

These Wrenches are drop-forged from bar steel, have hardened tool steel jaws and are light, strong and durable.

In workmanship, style and finish they are unexcelled.

Nos.	Length, Inches	Holding Taps	Each
6	7	1/16 to ¼	$1.90
7	11	3/16 to ½	3.35
8	15	¼ to ¾	3.80
9	20	⅜ to 1	4.75

Tap Wrenches

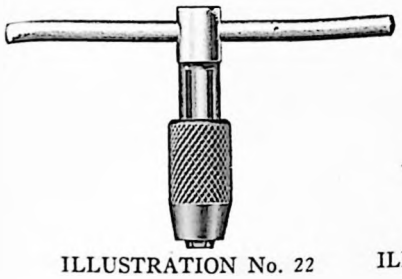


ILLUSTRATION No. 22

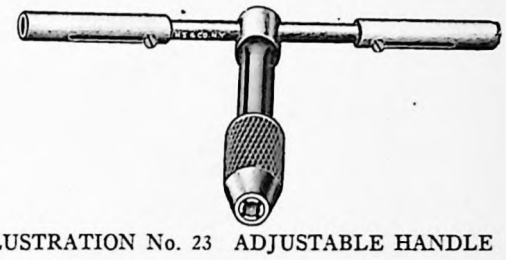


ILLUSTRATION No. 23 ADJUSTABLE HANDLE

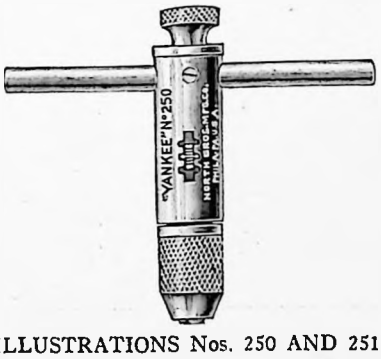
Jaws are made of hardened tool steel. The long knurled sleeves provide a good strong grip.

		Each
No. 21	Holds Taps $\frac{1}{16}$ to $\frac{1}{4}$ inch; holds Drills $\frac{1}{16}$ to $\frac{3}{16}$ inch	$0.56
No. 22	Holds Taps $\frac{3}{16}$ to $\frac{1}{2}$ inch; holds Drills $\frac{1}{16}$ to $\frac{5}{16}$ inch	1.13
No. 23	Holds Taps $\frac{3}{16}$ to $\frac{1}{2}$ inch; holds Drills $\frac{3}{16}$ to $\frac{5}{16}$ inch	1.45

Ratchet

Yankee

Right and Left Hand and Rigid



ILLUSTRATIONS Nos. 250 AND 251

The distinguishing features are its adaptability, convenience and efficiency for working in close quarters, corners and inaccessible places.
With the shifter at top, ratchet is left hand; at bottom, right hand; in center, rigid, as ordinary Tap Wrench.
The crossbar is held central by a friction device and of ample leverage for even larger taps than the chuck will hold.
A knurled thumb piece at top of Wrench affords a ready means of starting in and backing out the tap quickly. In the end of this thumb piece is a countersunk hole to use Tap Wrench on lathe center when desired.
The cross arm can be readily withdrawn, so that little room is taken up in tool chest or drawer.
Particularly suitable in holding small drills for use on lathe centers.
The ratchet and pawls are made of tool steel, hardened and tempered. The chuck has hardened steel jaws. All parts of tool are made of steel and polished.

		Each
No. 250	Holds up to $\frac{1}{4}$ inch Taps; outside diameter of chuck, $\frac{3}{4}$ inch; length over all, $3\frac{1}{4}$ inches	$1.40
No. 251	Holds up $\frac{1}{4}$ inch Taps, outside diameter of chuck, $\frac{7}{8}$ inch; length over all, 5 inches	1.85
No. 1251	Same as No. 251, except length over all is 13 inches, for work in steel cars, etc., and where long reach is necessary	2.40

ILLUSTRATION No. 1251

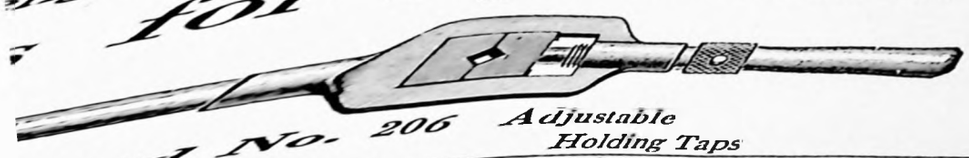
...ICE		NUMBER OF THREADS TO THE INCH	
... Dozen	Each	Standard	Also Furnished
$2.85	$0.27	72	56, 64
2.57	.24	64	56
2.28	.21	56	48
2.28	.21	48	32, 36, 40
2.00	.18	44	36, 40
2.00	.18	40	32, 36
2.00	.18	36	30, 32, 40
2.28	.18	32	24, 30
2.57	.19	30	24, 28, 32
3.08	.24	28	24, 32
3.08	.29	24	20
3.42	.29	22	18, 20
3.42	.31	20	18
	.31	20	16, 18

...e taps will be furnished in sets of taper, plug and bottoming, like hand

...less otherwise specified.

...ngths and threads not listed, are subject to special prices.

... for Taps, Reamers or Drills



...Card No. 206 Adjustable Holding Taps

	Each
1/16 to 1/8	$1.45
1/8 to 3/16	1.90
3/16 to 1/4	2.85
1/4 to 5/16	3.35
1/2 to 3/4	3.80

...eld Patent Adjustable

... have hardened tool steel jaws and are light,

...lled.

... Holding Taps	Each
... to 1/4	$1.90
... to 3/8	3.35
... to 3/4	3.80
... to 1	4.75

...rnished Notice

ILLUSTR...

The distinguishing features ar... working in close quarters, corn... With the shifter at top, ratchet ... rigid, as ordinary Tap Wrench. The crossbar is held central by a ... larger taps than the chuck wi... A knurled thumb piece at ... and backing out the ... countersunk hole t... The cross arm car... chest or drawer. Particularly suit... The ratchet ar... chuck has hav... ished.

No. 250 F...

No. 25...

Since 1848 HAMMACHER, SCHLEMMER

Tap Wrenches

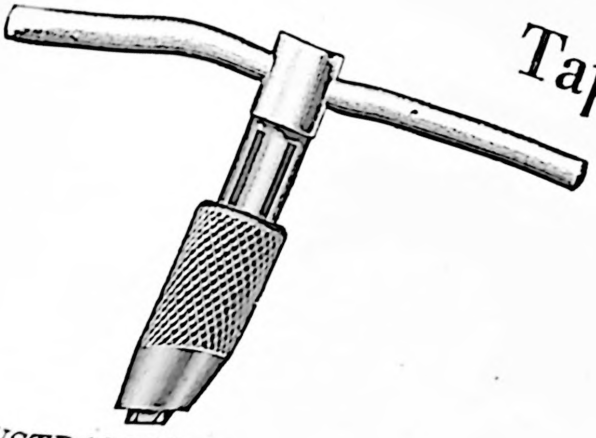


ILLUSTRATION No. 22

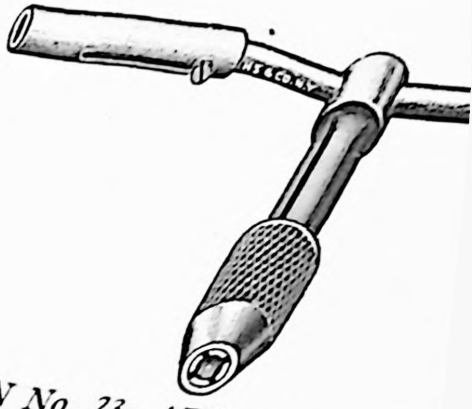


ILLUSTRATION No. 23 ADJUSTABLE HA

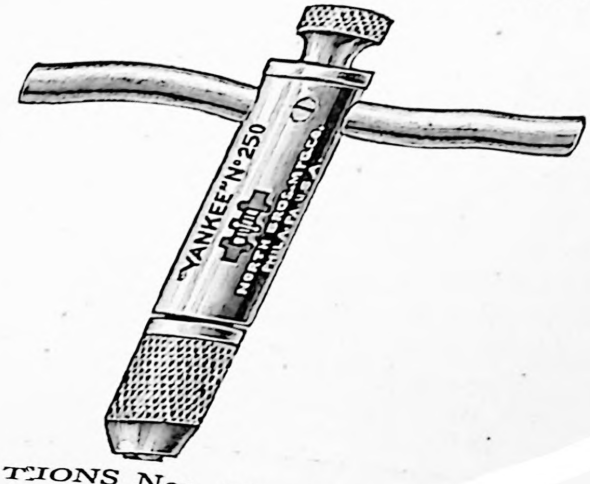
Jaws are made of hardened tool steel. The long knurled sleeves provide a good strong

No. 21 Holds Taps $\frac{1}{16}$ to $\frac{1}{4}$ inch; holds Drills $\frac{1}{16}$ to $\frac{3}{16}$ inch..... E
No. 22 Holds Taps $\frac{3}{16}$ to $\frac{1}{2}$ inch; holds Drills $\frac{3}{16}$ to $\frac{5}{16}$ inch..... $0.
No. 23 Holds Taps $\frac{3}{16}$ to $\frac{1}{2}$ inch; holds Drills $\frac{3}{16}$ to $\frac{5}{16}$ inch..... 1.1
..... 1.45

Ratchet

Yankee

Right and Left Hand and Rigid



TIONS Nos. 250 AND

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Machine Screw Taps

S. W. Card

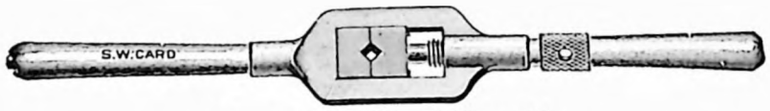
A. S. M. E. Standard

We recommend the adoption of this standard.

Screw Gauge No.	PRICE		NUMBER OF THREADS TO THE INCH	
	Per Dozen	Each	Standard	Also Furnished
1	$2.85	$0.27	72	56, 64
2	2.57	.24	64	56
3	2.28	.21	56	48
4	2.28	.21	48	32, 36, 40
5	2.00	.18	44	36, 40
6	2.00	.18	40	32, 36
8	2.00	.18	36	30, 32, 40
9	2.00	.18	32	24, 30
10	2.28	.19	30	24, 28, 32
12	2.57	.24	28	24, 32
14	3.08	.29	24	20
16	3.08	.29	22	18, 20
18	3.42	.31	20	18
20	3.42	.31	20	16, 18

When so ordered, the taps will be furnished in sets of taper, plug and bottoming, like hand taps.
Plug taps furnished unless otherwise specified.
Left-hand taps, sizes, lengths and threads not listed, are subject to special prices.

Wrenches for Taps, Reamers or Drills



Card No. 206 Adjustable

Nos.	Length, Inches	Holding Taps	Each
0	5	1/16 to 3/16	$1.45
1	7 1/2	1/8 to 3/8	1.90
1 1/2	9 1/2	3/16 to 1/2	2.85
2	12	1/4 to 5/8	3.35
3	14	1/2 to 3/4	3.80

Card No. 208 Horsfield Patent Adjustable

These Wrenches are drop-forged from bar steel, have hardened tool steel jaws and are light, strong and durable.
In workmanship, style and finish they are unexcelled.

Nos.	Length, Inches	Holding Taps	Each
6	7	1/16 to 1/4	$1.90
7	11	3/16 to 1/2	3.35
8	15	1/4 to 3/4	3.80
9	20		

Tap Wrenches

ILLUSTRATION No. 22

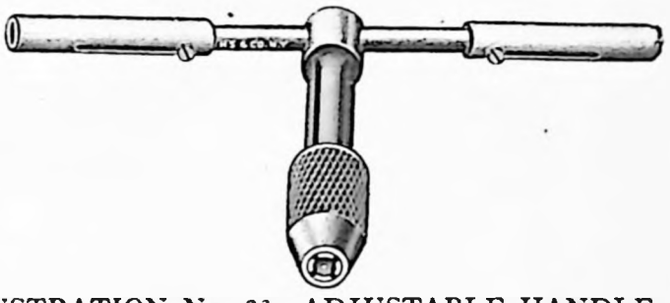


ILLUSTRATION No. 23 ADJUSTABLE HANDLE

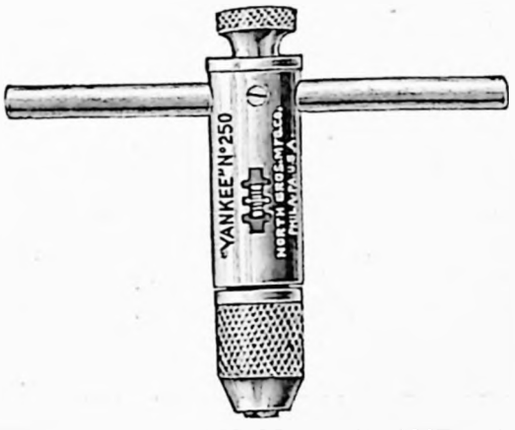
Jaws are made of hardened tool steel. The long knurled sleeves provide a good strong grip.

		Each
No. 21	Holds Taps 1/8 to 1/4 inch; holds Drills 1/16 to 13/64 inch	$0.56
No. 22	Holds Taps 3/16 to 1/2 inch; holds Drills 1/16 to 7/32 inch	1.13
No. 23	Holds Taps 3/16 to 1/2 inch; holds Drills 3/16 to 5/16 inch	1.45

Ratchet

Yankee

Right and Left Hand and Rigid



ILLUSTRATIONS Nos. 250 AND 251

The distinguishing features are its adaptability, convenience and efficiency for working in close quarters, corners and inaccessible places.
With the shifter at top, ratchet is left hand; at bottom, right hand; in center, rigid, as ordinary Tap Wrench.
The crossbar is held central by a friction device and of ample leverage for even larger taps than the chuck will hold.
A knurled thumb piece at top of Wrench affords a ready means of starting in and backing out the tap quickly. In the end of this thumb piece is a countersunk hole to use Tap Wrench on lathe center when desired.
The cross arm can be readily withdrawn, so that little room is taken up in tool chest or drawer.
Particularly suitable in holding small drills for use on lathe centers.
The ratchet and pawls are made of tool steel, hardened and tempered. The chuck has hardened steel jaws. All parts of tool are made of steel and polished.

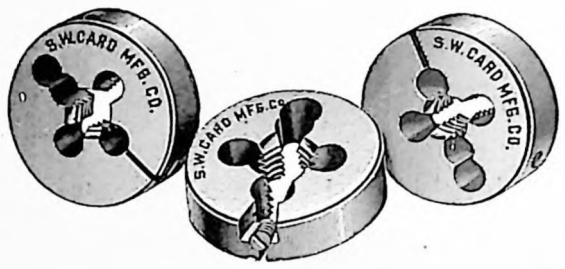
		Each
No. 250	Holds up to 7/16 inch Taps; outside diameter of chuck, 3/4 inch; length over all, 3 1/4 inches	$1.40
No. 251	Holds up 9/16 inch Taps, outside diameter of chuck, 7/8 inch; length over all, 5 inches	1.85
No. 1251	Same as No. 251, except length over all is 13 inches, for work in steel cars, etc., and where long reach is necessary	2.40

ILLUSTRATION No. 1251

Round Adjustable Dies

S. W. Card

Machine Screw Sizes



O. D. 5/8 inch; Thickness, 1/4 inch; No. 804
O. D. 13/16 inch; Thickness, 1/4 inch; No. 805
O. D. 1 inch; Thickness, 3/8 inch; No. 805

A. S. M. E. Standard

A. S. M. E. Standard Furnished Unless Otherwise Ordered

Screw Gauge No.	NO. OF THREADS TO THE INCH		OUTSIDE DIAMETER PRICE, EACH		
	Standard	Also Furnished	5/8 Inch	13/16 Inch	1 Inch
1	72	56, 64	$0.80	$0.90	....
2	64	56	.70	.80	....
3	56	48	.60	.70	....
4	48	32, 36, 40	.50	.60	....
5	44	36, 40	.50	.60	....
6	40	32, 36	.50	.60	$0.75
8	36	30, 32, 40	.50	.60	.75
10	30	24, 28, 32	.50	.60	.75
12	28	24, 32	.50	.60	.75
14	24	20	.50	.60	.75
16	22	18, 20	....	.60	.75
18	20	18	....	....	.75

Solid Square Bolt Dies

S. W. CARD No. 905

These Dies are furnished for rough iron 1/64 over size, from 1/4 to 5/8 inch inclusive; 1/32 over size from 1/4 to 1 inch inclusive.
United States Standard Thread always furnished unless otherwise specified.

Forged from high-grade tool steel, perfectly machined and finished, accurately cut, ground and tempered.

Bolt Size, In.	No. of Threads to the Inch, U. S. S.	Size, Sq. Ins.	Thickness, Ins.	Each
1/4	20	2 1/2	1/2	$1.5
5/16	18	2 1/2	1/2	1.5
3/8	16	2 1/2	1/2	1.5
1/2	13	2 1/2	3/4	1.
5/8	11	2 1/2	3/4	1.
3/4	10	2 1/2	3/4	1
7/8	9	2 1/2	3/4	1
1	8	2 1/2	1	2

Round Adjustable Dies

S. W. Card

Fractional Sizes

Outside Diameter	Thickness
5/8 inch	1/4 inch
13/16 inch	1/4 inch
1 inch	3/8 inch
1 5/16 inch	7/16 inch
1 1/2 inch	1/2 inch
1 9/16 inch	9/16 inch
2 1/4 inch	3/4 inch

Cutting Size Inch	NUMBER OF THREADS TO THE INCH — Standard Pitches: U. S. Std.	S.A.E. Std.	Whitworth Std.	British Standard Fine	V Form	Other U. S. Threads also Furnished	OUTSIDE DIAMETER PRICE EACH: 5/8 In.	13/16 In.	1 In.	1 5/16 In.	1 1/2 In.	1 15/16 In.	2 1/4 In.
1/16	64	..	60	....	..	72	.80	.90	...	...	...	...	...
1/8	40	..	40	....	..	32	.50	.60	.75		..	...	...
3/16	24	..	24	....	..	32	.50	.60	.75	...	..	...	...
1/4	20	28	20	26	20	24, 27, 32	.50	.60	.75	1.25	1.25	1.30	...
5/16	18	24	18	22	18	20, 27, 32	...	.60	.75	1.25	1.25	1.30	...
3/8	16	24	16	20	16	20, 27	...	...	.75	1.25	1.25	1.30	...
7/16	14	20	14	18	14	24, 27	...	...	.75	1.25	1.25	1.30	...
1/2	13	20	12	16	12	12, 24, 27	...	...	...	1.25	1.25	1.30	...
9/16	12	18	12	16	12	27	...	...	...	...	1.25	1.30	...
5/8	11	18	11	14	11	12, 27	...	...	...	...	1.25	1.30	2.65
11/16	11	16	11	14	..	..	...	...	...	...	...	...	2.65
3/4	10	16	10	12	10	12, 27	...	...	...	...	...	...	2.65
7/8	9	14, 18	9	11	9	12, 27	...	...	...	...	...	...	2.65
1	8	14	8	10	8	12, 27	...	...	...	...	...	...	2.65

United States Standard form of thread furnished unless otherwise specified.
Sizes, dimensions and threads not listed are subject to special prices.
Left-hand Dies are special.

Screw Plate Stocks

S. W. Card. For Round Adjustable Dies

No. of Stock	Length	Outside Diameter of Die	Price Each
2	5 inches	5/8 inch	$0.80
3	7 inches	13/16 inch	1.05
4	9 inches	1 inch	1.30
5	14 inches	1 5/16 inches	1.85
6	18 inches	1 1/2 inches	2.10
7	18 inches	1 15/16 inches	2.10
10	29 inches	2 1/4 inches	3.70

Screw Plates

Diamond

	Each
Set Diamond N-N Stock, 7 inches long; Tap Wrench, 7½ inches long; 6 Dies, $\frac{1}{8}$ inch in diameter, and 6 Taps; cutting 4, 36; 6, 32; 8, 32; 10, 24; 12, 24; 14, 20	$7.65
Set Diamond P-1 Stock, 7 inches long; Tap Wrench, 7½ inches long; 8 Dies, $\frac{1}{8}$ inch diameter, and 8 Taps; cutting 2, 56; 3, 48; 4, 36; 6, 32; 8, 32; 10, 24; 12, 24; 14, 20	9.35
Set No. 16 Stock, 9 inches long; 5 Dies, 1 inch diameter, and 5 Taps; cutting $\frac{7}{16}$, 24; ¼, 20; $\frac{5}{16}$, 18; ⅜, 16; $\frac{7}{16}$, 14	7.25
Set No. 22 Stock, 14 inches long; 5 Dies, $1\frac{7}{16}$ inches diameter, and 5 Taps; cutting ¼, 20; $\frac{5}{16}$, 18; ⅜, 16; $\frac{7}{16}$, 14; ½, 13	10.20

The above Screw Plates will be sent with United States Standard Threads.

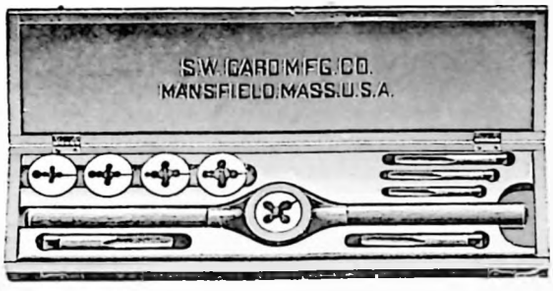
Whitworth Standard furnished at same prices.

Screw Plates

Diamond

S. A. E. Standard

For Automobile Repair Work



Special Attention

For general automotive repair work, the garage or shop, these Screw Plates should prove an indispensable adjunct. Stocks are made from finest steel, accurately machined and thoroughly tested before leaving factory. The Taps and Dies also go through the same rigid examination as to material, temper, strength and accuracy with the result that every set—packed compactly in a handsome, hardwood case—gives the user marked satisfaction and establishes a reputation for a high grade set at a reasonable price.

Set No. 15. S. A. E. Standard. — Each

Stock, 14 inches long, with 5 Dies, 1 5/8 inches diameter, and 5 Taps; cutting 1/4, 28; 5/16, 24; 3/8, 24; 7/16, 20; 1/2, 20 ..... $10.20

Set No. 2. S. A. E. Standard.

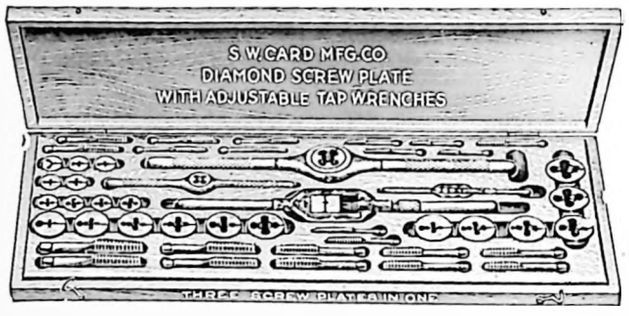
One Stock, 14 inches long, with 5 Dies, 1 5/8 inches diameter, and 5 Taps; cutting 1/4, 28; 5/16, 24; 3/8, 24; 7/16, 20; 1/2, 20; one Stock, 29 inches long, with 6 Dies, 2 1/4 inches diameter, and 6 Taps; cutting 5/16, 18; 5/8, 18; 13/16, 16; 3/4, 16; 7/8, 14; 1, 14 ..... 35.30

Screw Plates

Diamond

S. A. E. Standard

For Automobile Repair Work



Three Screw Plates in One

The No. 5 Diamond Screw Plate is the most complete Automobile Repair Screw Plate on the market. It is three screw plates in one, containing a good assortment of Machine Screw, U. S. Standard and S. A. E. Standard Sizes. Complete in one case and at a much lower price than if purchased separately.

There is not a size in the assortment that you may not be called upon to use every day.

Set No. 5.

23 Plug Taps and 23 Round Adjustable Dies, 2 Tap Wrenches and 2 Die Stocks, as follows:

10-$\frac{13}{16}$ inches Round Dies, cutting 2, 56; 3, 48; 4, 36; 6, 32; 8, 32; 10, 24; 12, 24; 14, 20; 16, 18; 18, 18.

10 Machine Screw Taps to match above.

1-7-inch Diamond Die Stock for $\frac{13}{16}$-inch Round Dies.

1 No. 0 Card Tap Wrench fitting taps $\frac{1}{16}$ inch to $\frac{1}{4}$ inch.

6-1$\frac{5}{16}$ inches Round Dies, cutting $\frac{3}{16}$, 24; $\frac{1}{4}$, 20; $\frac{5}{16}$, 18; $\frac{3}{8}$, 16; $\frac{7}{16}$, 14 and $\frac{1}{2}$, 13, U. S. Standard Threads.

6 Machinists' Plug Hand Taps to match above Dies.

7-1$\frac{5}{16}$ inches Round Dies, cutting $\frac{1}{4}$, 28; $\frac{5}{16}$, 24; $\frac{3}{8}$, 24; $\frac{7}{16}$, 20; $\frac{1}{2}$, 20; $\frac{9}{16}$, 18, and $\frac{5}{8}$, 18, S. A. E. Standard Threads.

7 Machinists' Plug Hand Taps to match above Dies.

1-14-inch Diamond Die Stock for 1$\frac{5}{16}$ inches Round Dies.

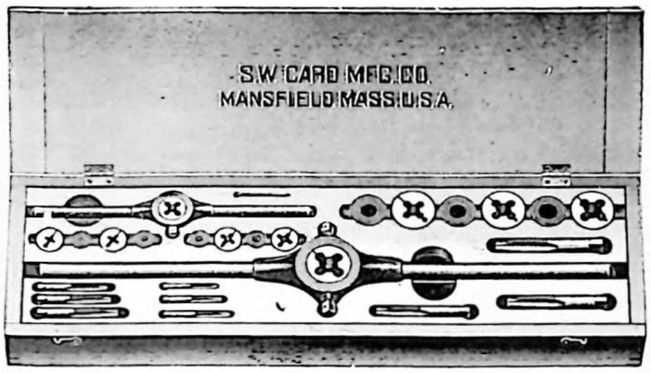
1 No. 2 Tap Wrench fitting taps $\frac{1}{4}$ inch to $\frac{5}{8}$ inch.

No. 5. Complete in hardwood case.....$35.70

Screw Plates

S. W. Card

Improved



These screw plates are furnished with Round Adjustable Dies and Steel Guides. Dies are adjusted by means of a tapering screw, which permits sufficient adjustment to obtain either a tight or a loose fit. They are constructed so that they will always grip the screw whether it is moved in or out, thereby keeping the cutting teeth in perfect alignment.

Set No.	Cutting	Length Stock, Inches	Each
53	1/8—40, 5/32—32, 3/16—24, 5/32—24, 1/4—20	7	$8.10
55	1/8—40, 3/16—32, 1/4—20, 5/16—18	7	7.45
60	3/16—24, 1/4—20, 5/16—18, 3/8—16, 7/16—14	10½	8.95
70	1/4—20, 5/16—18, 3/8—16, 7/16—14, 1/2—13	14	11.90
50	4—36, 6—32, 8—32, 10—24, 12—24	7	8.10
50½	4—36, 6—32, 8—32, 10—24, 12—24, 14—20	7	9.15
52	4—36, 6—32, 8—32, 10—24, 12—24, 14—20, 16—18, 18—18.	7	11.05
52A	2—56, 3—48, 4—36, 6—32, 8—32, 10—24, 12—24, 14—20...	7	11.05
52B	2—56, 3—48, 4—36, 6—32, 8—32, 10—24, 12—24, 14—20, 16—18, 18—18	7	13.20

Improved stocks and dies are furnished with collets which enable the material to enter the die accurately, thereby insuring an absolutely perfect thread.

English, Metric, S. A. E., or A. L. A. M. Standards

As the name implies, the Automobile Screw Plate was originally designed for the automobilist's use, but embodying as it does all of the principal screw and bolt sizes, it is particularly handy for general use.

We have also included in it the necessary Morse Tap Drills of the correct size for each tap. The English Measure Plate cuts 4-36, 6-32, 8-32, 10-24 and 12-24 machine screw threads, and 1/4-20, 5/16-18, 3/8-16, 7/16-14 and 1/2-13 U. S. Standard Threads. Has two tap wrenches and two stocks.

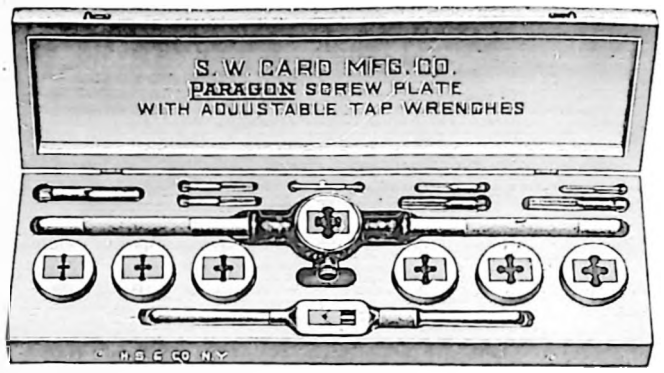
The Metric Measure Plate cuts 3-5, 4-75, 5-75, 6-1, 7-1, 8-1, 9-1, 10-1.5, 11-1.5 and 12-1.5 mm., and has two tap wrenches and two stocks.

The S. A. E. or A. L. A. M. Plate cuts 1/4-28, 5/16-24, 3/8-24, 7/16-20, and 1/2-20 threads and has one tap wrench and one stock.

		Per Set
No. 1000	English Measure, with Diamond Stocks and Dies	$21.25
No. 1001	English Measure, with Improved Stocks and Dies	26.35
No. 2000	Metric Measure with Diamond Stocks and Dies	22.55
No. 3001	S. A. E. or A. L. A. M. Measure, with Improved Stock and Dies	17.00

Screw Plates

Paragon



In the manufacture of Paragon Screw Plates, the greatest care has been exercised in turning out a finished product with the result that its user will find it a paragon of excellence in every way.

By referring to illustrations the construction of the Paragon Die and Guide is easily apparent. The method of a square lock in fitting the die into the cap, gives an exceptionally good bearing surface to the die, and insures perfect alignment when the guide is screwed into place. There is no chance for wear and displacement of die in this style of fit, thus the alignment is sure to be maintained during the whole life of the die.

The parallel adjustment feature of this die is an improvement over the ordinary round die, and a strong point in its favor.

It is not possible to get practical adjustment in round dies except perhaps for tight and loose fits, and then the adjustment is only on one side of the die, and the cutting sections not parallel.

Paragon Dies, when dull, can be removed from the collet very easily and ground, which also is impossible with a round die, and a very conclusive argument in favor of their use.

To cut close to a shoulder start the thread with the guide side of the die and finish with the face side.

We strongly recommend the Paragon Die in all screw plate assortments from ¼ inch to 1½ inches.

The stocks are beautifully mottled and are supplied with hollow steel knurled handles, which make them very light, and they are also strong and serviceable. When ordering repairs give the Set Number and Collet Number.

One-Stock Sets—Taper Taps

Set No.	Cutting	Each
502	¼-20, 5/32-18, ⅜-16, 7/32-14, ½-13	$15.75
504	¼-20, 5/32-18, ⅜-16, 7/32-14, ½-13, ⅝-11, ¾-10	23.40

Two-Stock Sets—Taper Taps

Set No.	Cutting	Each
510	¼-20, 5/32-18, ⅜-16, 7/32-14, ½-13, ⅝-11, ¾-10	$25.50
511	¼-20, 5/32-18, ⅜-16, 7/32-14, ½-13, ⅝-11, ¾-10, ⅞-9, 1-8	37.00

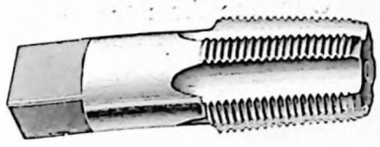
S. A. E. or A. L. A. M. Standard Sets—Plug Taps

For Automobile Repair Work

Set No.	Cutting	Each
518	¼-28, 5/32-24, ⅜-24, 7/32-20, ½-20	$15.75
518½	¼-28, 5/32-24, ⅜-24, 7/32-20, ½-20, ⅝-18, ¾-16	23.40

Above prices are subject to change without notice

Pipe Taps



Taper (Briggs Standard)

Size, Inches	Threads per Inch	Each	Size, Inches	Threads per Inch	Each
⅛	27	$0.40	1	11½	$1.70
¼	18	.49	1¼	11½	2.25
⅜	18	.65	1½	11½	2.97
½	14	.81	2	11½	4.50
¾	14	1.13			

Standard taper is ¾ inch to the foot. Right-hand threads are always furnished unless left-hand threads are specified on the order.

Pipe Reamers

Taper

For Use with Briggs Standard Pipe Taps

Size, Inches	Each	Size, Inches	Each
⅛	$0.57	1	$2.50
¼	.68	1¼	3.60
⅜	.90	1½	4.75
½	1.15	2	7.20
¾	1.60		

Burring Reamers

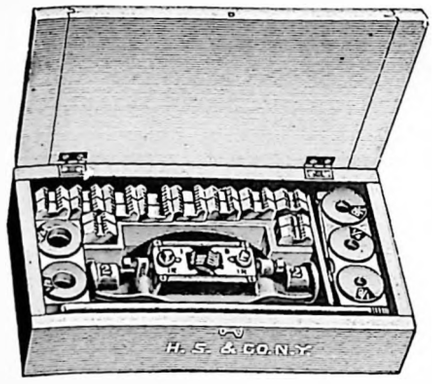
These Burring Reamers are made of finest steel and designed especially for removing burrs caused by cutting pipe. They are also extensively used for countersinking.
Great care is taken in grinding these tools to adapt them for use in a variety of materials.

Spiral Fluted Burring Reamers

Nos.	Capacity Pipe, Inches	Each
241	⅛ to ½	$1.00
242½	¼ to 1¼	1.50
243	½ to 2	3.00

Pipe Stock and Dies

Genuine Armstrong

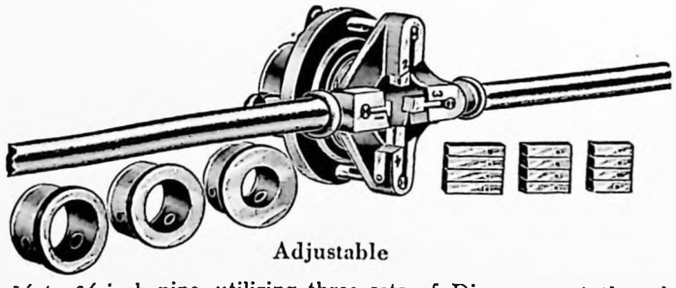


Adjustable

Nos.	Number of Dies	Cutting Pipe, Inches	Complete	Extra Dies	Extra Bushings
1	4 right	⅛ to ½	$5.30	$1.00	$0.20
2	5 right	¼ to 1	7.00	1.25	.25
2½	4 right	½ to 1¼	8.20	2.17	.37
3	3 right	1¼ to 2	10.55	2.78	.47

Pipe Threading Devices

Toledo



Adjustable

No. 0 threads ⅛ to ¾ inch pipe, utilizing three sets of Dies, one set threads ⅛-inch pipe, another the ¼ and ⅜ inch, and the third set ½ and ¾ inch.
The tool is light and compact, and measures 26 inches between tips of handles. Left-hand Dies for ½-inch and ¾-inch sizes only can be supplied. Weight, 6½ pounds.

No. 0 ⅛ to ¾ inch, inclusive, complete.....$12.00

With a No. 1 device, one man can thread 2-inch pipe easily with one hand. A separate set of Dies is used for each size of pipe. The tool is compact and weighs 17 pounds.

No. 1 1 to 2 inches, inclusive, complete.....$14.40

No. 1A device is adapted for threading pipe in restricted places, otherwise inaccessible. The tool is the same as the No. 1, except it has ratchet attachment.

No. 1A 1 to 2 inches, inclusive, complete.....$18.00

No. 2 has a capacity of 2½ to 4 inch pipe. With it one man can cut 4-inch threads easily. Tool is operated by ratchet handle or driving cross. Compact and portable. Weighs 80 pounds.

No. 2 2½ to 4 inches, complete.....$50.00

Auger Bits

Genuine Russell Jennings

Crucible Tool Steel

Double Thread. Unsurpassed for accurate work in seasoned wood, not extremely gummy or hard. Preferred by cabinetmakers.

Quick Boring. Especially adapted for hard or gummy woods, end grain boring, mortising doors, etc.

The manufacture of the best Auger Bits requires steel made by the crucible process, and in order to secure uniform temper, the analysis must be kept uniform. Russell Jennings Bits are of genuine crucible tool steel. Made to order, never bought in the open market. It is high in carbon, and while a softer quality of steel would be more easily worked, the Bits would not retain their cutting edges. The forging must be done very carefully in order that the Bits may be of uniform density. The steel must not be burned or cooled suddenly. In forming the head every precaution is taken to insure strength at this point. The process of tempering is also very important and the baths for hardening and for drawing temper are especially prepared for this work, the temperature being determined accurately by pyrometer. The Bits are so ground that they will bore the exact size and not bind in the wood. Lips, spurs and throats are filed to such form that the cutting edges will not wear quickly and there will be clearance for chips. The easy boring qualities of Bits depend largely upon the screw threads, which have differences similar to saws. A cross-cut saw can be used with the grain, but it cuts slowly. An Auger Bit with a double thread can be used for practically all work, but it bores more slowly than the Bit with a coarse single thread screw point. The quick-boring Bit is simply a standard Auger Bit with a coarse single thread screw point.

Unless otherwise ordered, the standard thread will be supplied.

Auger Bits

Genuine Russell Jennings

Extension Lip

Length over all varies from 8½ inches to 10 inches, depending on size. Size in 32ds from 1/32 to 33/32 furnished at the price of next larger size. Standard extension lip auger bits are not carried in stock by 32ds above 16/16, nor in 16ths above 32/16, but can be made to order, at special prices, which depend on the number of bits ordered. Carried in stock, 3/16 to 16/16, inclusive, by 32ds; 16/16 to 32/16, inclusive, by 16ths.

Genuine Russell Jennings

Crucible Tool Steel

Size, in 16ths.....	3	3½	4	4½	5	5½	6	6½	7
Per dozen	$5.70	$5.70	$4.75	$4.75	$4.75	$4.75	$4.75	$4.75	$4.75
Each	.54	.54	.45	.45	.45	.45	.45	.45	.45
Size, in 16ths.....	7½	8	8½	9	10	11	12	13	14
Per dozen	$4.75	$4.75	$5.70	$5.70	$5.70	$6.65	$6.65	$7.85	$7.85
Each	.45	.45	.54	.54	.54	.64	.63	.74	.74
Size, in 16ths.....	15	16	17	18	19	20	21	22	23
Per dozen	$9.03	$9.03	$11.40	$11.40	$13.30	$13.30	$15.20	$15.20	$17.10
Each	.85	.85	1.08	1.08	1.25	1.25	1.43	1.43	1.60
Size, in 16ths.....	24	26	28	30	32				
Per dozen	$17.10	$19.95	$22.80	$25.65	$28.50				
Each	1.60	1.88	2.15	2.42	2.70				

Extension Lip Dowels

Originally designed for boring holes for dowel pins, but can be used wherever a bit shorter than standard is desired.

Length over all varies from 4½ to 6 inches, as follows:
1/16 to 8/16, inclusive, 4½ inches. 9/16 to 16/16, inclusive, 5 inches. 17/16 to 24/16, inclusive, 5½ inches. 25/16 to 32/16, inclusive, 6 inches.

Carried in Stock—3/16 to 12/16 by 32ds; 12/16 to 32/16 by 16...

Prices are same as those list...

Above prices are s...

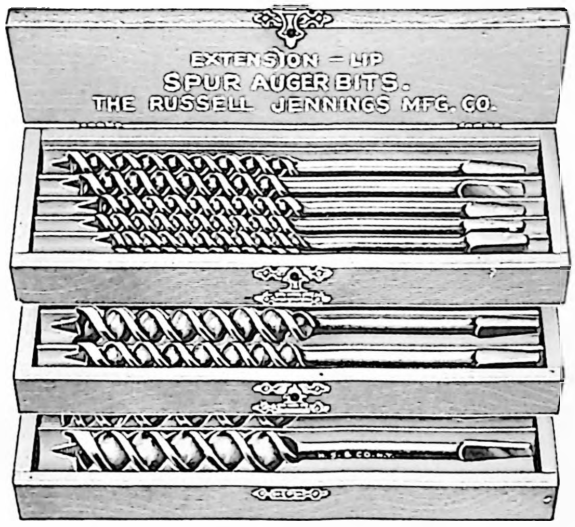
Auger Bits in Sets

Genuine Russell Jennings

Crucible Tool Steel—Extension Lip

See page 143 for illustrations and description of threads.

In Hardwood Tool Box

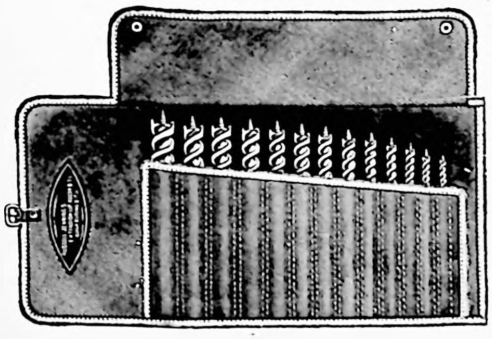


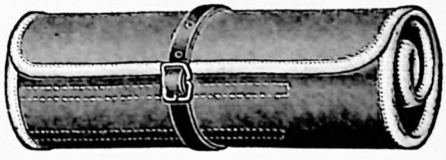
Furnished regularly in hardwood box or in canvas roll if desired.

Standard set of 32½ Quarters: Consists of 13 bits (1 each 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 sixteenths).

Each $8.10

In Canvas Roll





... is contained in these strong, well-bound and strapped canvas rolls, as in

.....$8.10

Auger Bits

Genuine Russell Jennings

Extension Lip

Length over all varies from 8½ inches to 10 inches, depending on size. Size in 32ds from 1/32 to 33/32 furnished at the price of next larger size. Standard extension lip auger bits are not carried in stock by 32ds above 16/16, nor in 16ths above 32/16, but can be made to order, at special prices, which depend on the number of bits ordered. Carried in stock, 3/16 to 16/16, inclusive, by 32ds; 16/16 to 32/16, inclusive, by 16ths.

Genuine Russell Jennings

Crucible Tool Steel

Size, in 16ths.....	3	3½	4	4½	5	5½	6	6½	7
Per dozen	$5.70	$5.70	$4.75	$4.75	$4.75	$4.75	$4.75	$4.75	$4.75
Each	.54	.54	.45	.45	.45	.45	.45	.45	.45

Size, in 16ths.....	7½	8	8½	9	10	11	12	13	14
Per dozen	$4.75	$4.75	$5.70	$5.70	$5.70	$6.65	$6.65	$7.85	$7.85
Each	.45	.45	.54	.54	.54	.64	.63	.74	.74

Size, in 16ths.....	15	16	17	18	19	20	21	22	23
Per dozen	$9.03	$9.03	$11.40	$11.40	$13.30	$13.30	$15.20	$15.20	$17.10
Each	.85	.85	1.08	1.08	1.25	1.25	1.43	1.43	1.60

Size, in 16ths.....	24	26	28	30	32
Per dozen	$17.10	$19.95	$22.80	$25.65	$28.50
Each	1.60	1.88	2.15	2.42	2.70

Extension Lip Dowell

Originally designed for boring holes for dowel pins, but can be used wherever a bit shorter than standard is desired.

Length over all varies from 4½ to 6 inches, as follows:

3/16 to 8/16, inclusive, 4½ inches. 9/16 to 16/16, inclusive, 5 inches. 17/16 to 24/16, inclusive, 5½ inches. 25/16 to 32/16, inclusive, 6 inches.

Carried in Stock—3/16 to 12/16 by 32ds; 12/16 to 32/16 by 16ths.

Prices are same as those listed above.

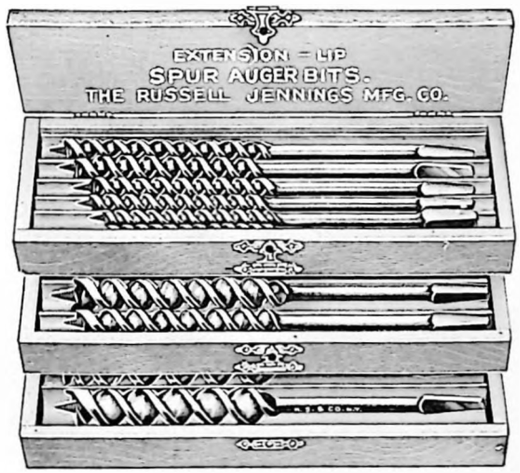
Auger Bits in Sets

Genuine Russell Jennings

Crucible Tool Steel—Extension Lip

See page 143 for illustrations and description of threads.

In Hardwood Tool Box

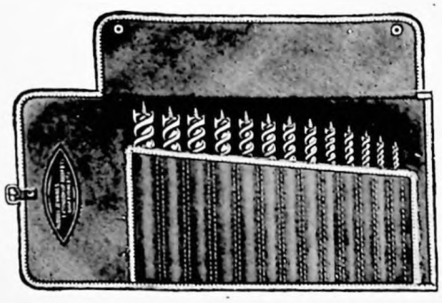


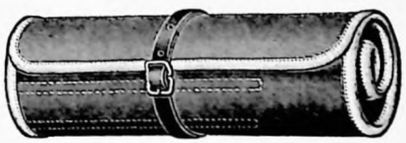
Furnished regularly in hardwood box or in canvas roll if desired.

Standard set of 32½ Quarters: Consists of 13 bits (1 each 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16 sixteenths).

Each $8.10

In Canvas Roll





The same set of bits is contained in these strong, well-bound and strapped canvas rolls, as in the above box.

Each $8.10

Auger Bits

Forstner

Approximate lengths over all:

¼ to $\frac{7}{16}$ inch, 6¼ inches
½ to $\frac{11}{16}$ inch, 6¾ inches
¾ to $\frac{15}{16}$ inch, 7¼ inches
1 to 1 $\frac{3}{16}$ inches, 7¾ inches
1¼ to 1½ inches, 8¼ inches

Larger than 2 inches in diameter are regularly about 9 inches over all.

For smooth, round or square boring, scroll and twist work. Bores any arc of a circle. Especially adapted for hardwood working.

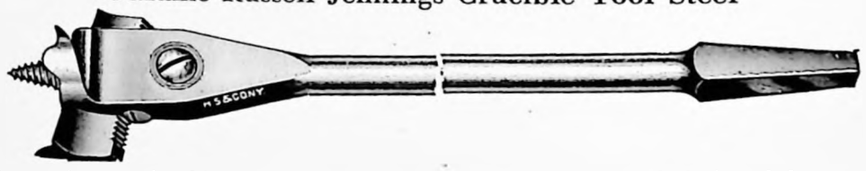
Is guided by its circular rim instead of its center, consequently it will bore any arc of a circle and can be guided in any direction regardless of grain or knots, leaving a true, polished surface. It is more expeditious than chisel, gouge, scroll saw or lathe tool combined, for core boxes, fine and delicate patterns, veneers, screen work, scalloping, fancy scroll twist columns, newels, ribbon moulding and mortising, etc.

Sizes, inch....	¼	$\frac{5}{16}$	⅜	$\frac{7}{16}$	½	$\frac{9}{16}$	⅝	$\frac{11}{16}$	¾	$\frac{13}{16}$	⅞	$\frac{15}{16}$	1
Each	$0.85	$0.85	$0.95	$0.95	$1.00	$1.09	$1.09	$1.14	$1.23	$1.33	$1.33	$1.62	$1.62

Sizes, inches	$1\frac{1}{16}$	1⅛	1¼	1⅜	1½
Each	$1.71	$1.71	$2.09	$2.23	$2.85

Expansive Bits

Genuine Russell Jennings Crucible Tool Steel



The strongest expansive bit on the market. The head is solid and designed for maximum strength. A passageway formed in the solid head takes the cutter which is adjusted by a worm in mesh with threads on the cutter, which form a rack. Precise adjustment to size is remarkably easy, for the worm gives perfect control over very slight movement. The pitch of the adjusting screw is such that one complete turn of this screw changes the diameter of the hole ⅛ inch. One half-turn of the adjusting screw changes the diameter $\frac{1}{16}$ inch, and so on.

Creeping of the expansive bit cutter is absolutely prevented by a clamping screw, which holds the worm and cutter firmly in position.

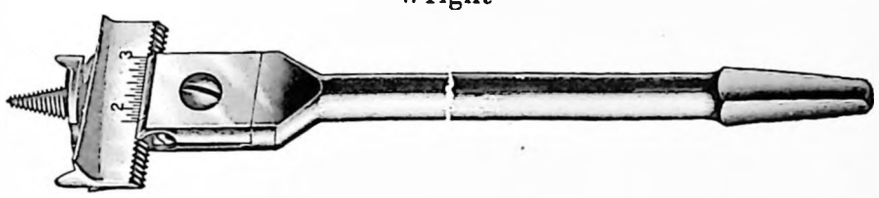
		Each
No. 71	With ordinary bit shank	$2.15

Parts

No. 72	Large Cutter	.59
No. 73	Small Cutter	.48
No. 74	Adjusting Screw	.11
No. 75	Clamping Screw	.08
No. 76	Beveled Washer	.13

Expansive Bits

Wright



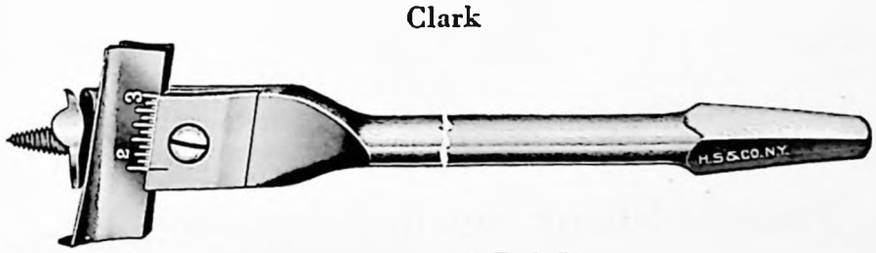
Made of a special cast steel. Finish and workmanship are of the best. The cutter absolutely cannot creep or slip. Each bit and cutter is warranted.

	Each
No. 10 or Large Bit has Nos. 3 and 4 cutters, bores from ⅞ to 3 inches	$2.75
No. 20 or Small Bit has Nos. 1 and 2 cutters, bores from ⅝ to 1¾ inches	2.35

Parts

	Each
No. 1 Cutter, bores ⅝ to 1⅛ inches	$0.34
No. 2 Cutter, bores 1⅛ to 1¾ inches	.43
No. 3 Cutter, bores ⅞ to 1¾ inches	.60
No. 4 Cutter, bores 1¾ to 3 inches	.68
No. 5 Cutter, bores 3 to 4 inches	1.02
Cap with adjusting screw, large	.42
Cap with adjusting screw, small	.35

Clark



Two Cutters with Each Bit

		Each
Small	Cutting from ½ to ⅞ inches, and ⅞ to 1½ inches	$1.45
Large	Cutting from ⅞ to 1¾ inches and 1¾ to 3 inches	2.05

Cutters

		Each
	Small	
No. 1	½ to ⅞ inch	$0.25
No. 2	⅞ to 1½ inches	.31
	Large	
No. 3	⅞ to 1¾ inches	.44
No. 4	1¾ to 3 inches	.50
No. 5	3 to 4 inches	.75

Parts

	Each
Screws	
Small	$0.05
Large	.06
Caps	
Small	.12
Large	.15

Gimlet Bits

H. S. & Co.

Size, 32nds.....	2	3	4	5	6	7	8	9	10	11	12
Per dozen	$1.30	$1.30	$1.30	$1.30	$1.30	$1.30	$1.30	$1.30	$1.30	$1.50	$1.50
Each	.12	.12	.12	.12	.12	.12	.12	.12	.12	.14	.14

Countersink Gimlet Bits

H. S. & Co.

Numbers.....	0	1	2	3	4
Diameter of Bit, inch.....	5/32	9/32	7/32	9/32	3/32
Bores, inches	3/4	1	1 1/4	1 1/2	1 3/4
Per dozen	$2.60	$2.60	$2.60	$2.60	$2.60
Each	.24	.24	.24	.24	.24

Straight Shank Machine Bits for Wood

Morse

ILLUSTRATION No. 355

Diameter, Inches	Whole Length, Inches	Each	Diameter, Inches	Whole Length, Inches	Each
1/8	3	$0.53	13/32	5 1/4	$1.13
5/32	3 1/4	.60	7/16	5 1/2	1.20
11/64	3 1/2	.67	15/32	5 3/4	1.33
7/32	3 3/4	.73	1/2	6	1.47
1/4	4	.80	17/32	6 1/8	1.60
9/32	4 1/4	.87	9/16	6 1/4	1.73
5/16	4 1/2	.93	5/8	6 1/2	2.00
11/32	4 3/4	1.00	11/16	7	2.27
3/8	5	1.07	3/4	7 1/2	2.53

Above prices are subject to change without notice

Twist Bits for Wood

Specially tempered and pointed for wood, but not injured by contact with nails. plaster, etc. The numbers indicate the sizes in 32nds of an inch.

Style A—Carbon Steel

Size of Shank $\frac{3}{16}$ x $\frac{3}{8}$ x $1\frac{1}{4}$ inches long

Nos.	Length Overall, Inches	Length Twist, Inches	Per dozen	Each
2	$3\frac{1}{2}$	$1\frac{1}{4}$	$2.38	$0.22
3	4	$1\frac{1}{2}$	2.38	.22
4	$4\frac{1}{2}$	$2\frac{1}{4}$	2.38	.22
5	5	$2\frac{1}{2}$	2.49	.23
6	$5\frac{1}{2}$	$2\frac{3}{4}$	2.92	.27
7	6	3	3.24	.30
8	$6\frac{1}{2}$	$3\frac{1}{4}$	3.57	.33
9	7	$3\frac{1}{2}$	4.00	.37
10	$7\frac{1}{2}$	$3\frac{3}{4}$	4.32	.40
11	$7\frac{3}{4}$	$3\frac{7}{8}$	4.65	.43
12	8	4	5.08	.47
13	$8\frac{1}{4}$	$4\frac{1}{8}$	5.40	.50
14	$8\frac{1}{2}$	$4\frac{1}{4}$	5.73	.53
15	$8\frac{3}{4}$	$4\frac{3}{8}$	6.27	.58
16	9	$4\frac{1}{2}$	6.81	.63
17	$9\frac{1}{4}$	$4\frac{5}{8}$	7.35	.68
18	$9\frac{1}{2}$	$4\frac{3}{4}$	7.89	.73
19	$9\frac{3}{4}$	$4\frac{7}{8}$	8.43	.78
20	10	5	8.97	.83

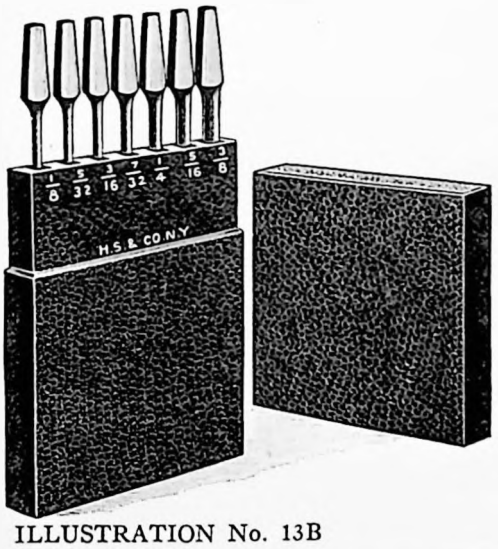


ILLUSTRATION No. 13B

Bit Stock Drills

In Sets

No. 13B

Flat leatherette case, containing one each, $\frac{1}{8}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{7}{32}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$ inch drills.

No. 13B Per set $2.78

Bit Handles

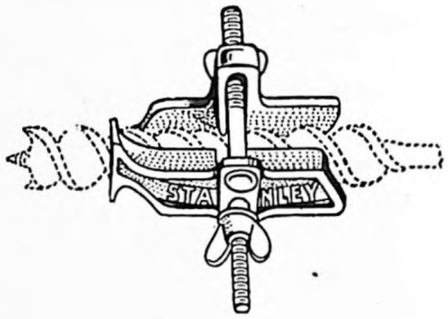
H. S. & Co.

ILLUSTRATION No. 1

ADJUSTABLE MALLEABLE IRON

Per dozen $2.16
Each ..... .20

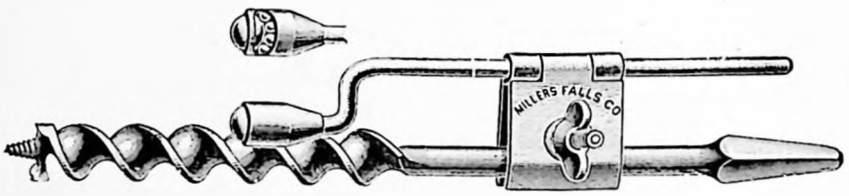
Auger Bit Gauges



Stanley Adjustable

This Gauge can be attached to bits of any size up to one inch in diameter. Two projections engage with the twist of the bit, so that it can be accurately set for the bit to bore to any depth required. Stops on both sides of the bit insure it remaining upright when the desired depth is reached, thus preventing the worm being bent or broken.

	Per Dozen	Each
No. 49 2½ inches long, nickel-plated	$7.78	$0.72



M. F. Co. Anti-Friction

Clamps to auger bit of any size.

Tightens on bit and gauge spindle at same time.

Ball in end, running on six smaller balls, to prevent defacing delicate material when in contact with gauge.

Length, 5¾ inches.

	Per Dozen	Each
No. 2 Polished and nickeled	$4.75	$0.44

Reamers

Cast Steel

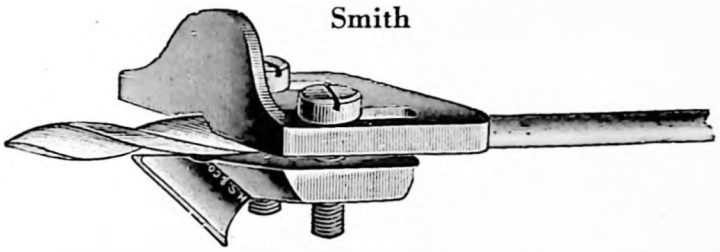
For Wood or Soft Metal

4 inches long; tapers from ½ to ⅛ inch

	Per Dozen	Each
No. 40 Square, ground concave	$3.78	$0.35

Countersinks

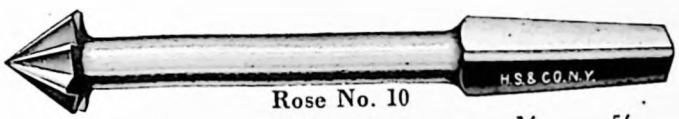
Smith



Adjustable

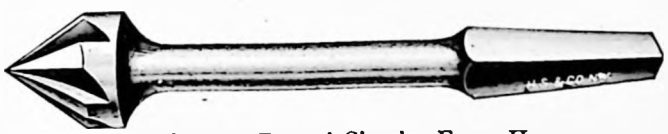
	Per Dozen	Each
¾ inch with depth gauge, will hold bits up to ⅜ inch. Without bits	$9.50	$0.88

H. S. & Co.



Rose No. 10

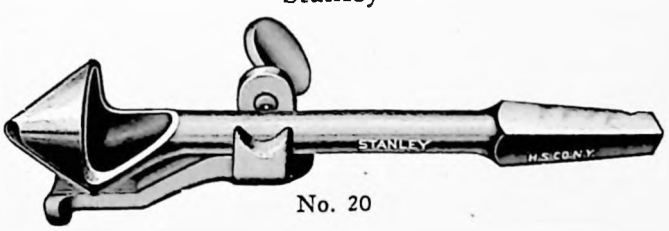
Size, inches	½	⅝	¾	1
Per dozen	$4.85	$4.85	$4.85	$6.05
Each	.45	.45	.45	.56



Rose No. 20—Round Shank—Extra Heavy

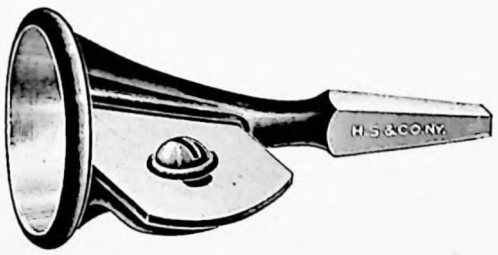
Size, inches	½	⅝
Per dozen	$5.62	$5.62
Each	.52	.52

Stanley



No. 20

Wheeler's Patent, with Gauge ⅞ inch. Per dozen	$3.90
Each	.36



Dowel Pointers

H. S. & Co.

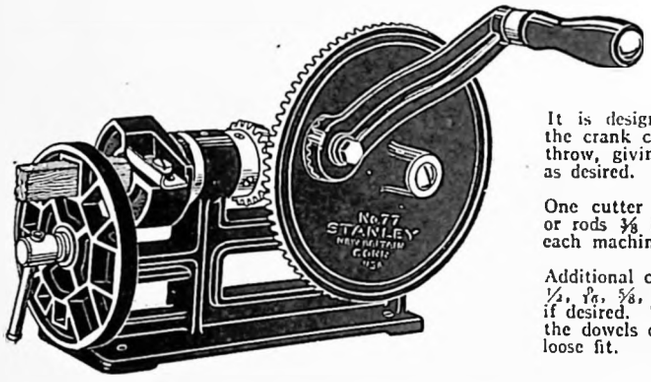
	Per Dozen	Each
No. 1 ¾ inch.....	$5.72	$0.53

Extra Knives

Each $0.22

Dowel and Rod Turning Machine

Stanley



With this machine the workman can cut his dowels when he is ready to use them and furthermore of the same materials as the wood being worked. It is designed to be operated by hand, and the crank can be adjusted for a long or short throw, giving power or speed to the machine as desired.

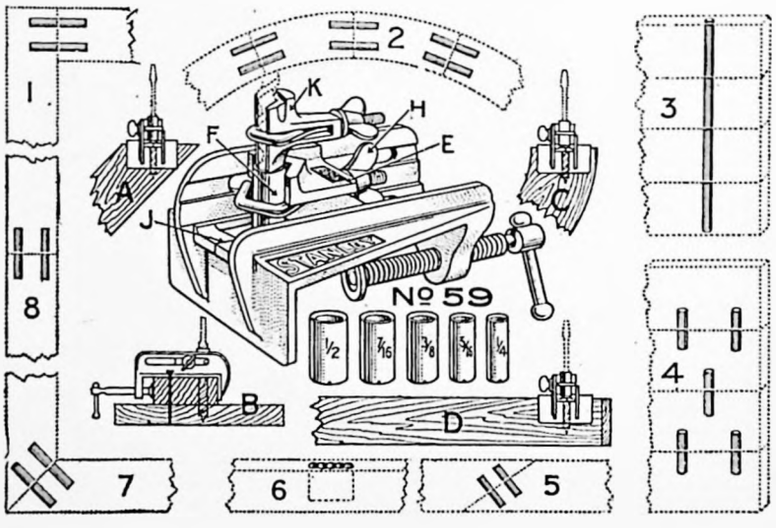
One cutter head complete for making dowels or rods ⅜ inch in diameter is furnished with each machine.

Additional cutter heads with cutters ¼, 5/16, 7/16, ½, 9/16, 5/8, 11/16 and ¾ inches can be furnished if desired. These cutters are adjustable so that the dowels or rods can be made for a tight or loose fit.

No. 77 Doweling Machine, with ⅜-inch cutter head $9.10
Additional cutter heads, each ..... .90

Doweling Jig

Stanley



This tool is for the purpose of enabling the user to bore dowel holes in the edge, end or surface of work with ease and accuracy. It will take any thickness of material up to three inches. It is also an excellent bit guide for mortising. Five steel guides 1¼ inches long are furnished: One each ¼, 5/16, ⅜, 7/16 and ½ inch. To allow for variations in size of bits, the guides are made 1/100 inch larger than the sizes given.

A depth gauge is also furnished which can be used with or without the jig. Where used without the jig, the gauge should be set with the large end towards the point of the bit, but in using same with the jig it should be set with the small end down, as shown in the cut.

Made entirely of metal, and working parts are milled true. A thoroughly practical tool.

		Each
No. 59	Nickel-plated	$2.95
No. 60	Nickel-plated, with 9 guides (1 each ¼, 5/16, ⅜, 7/16, ½, 9/16, 5/8, 11/16, ¾ inch)	4.35

Automatic Drills

Yankee

ILLUSTRATION No. 41

Has eight drill points, 1/16 to 11/64 inch, which are in plain sight when magazine is open. During the return movement of handle the drill point revolves backward to clear chips, etc. The Chuck is of new and improved design, and will hold drill points tight and absolutely rigid. Entire length of tool, inclusive of drill point, 11 3/8 inches.

	Per Dozen	Each
One in box	$27.00	$2.50

ILLUSTRATION No. 44

With adjustable tension. Of all the Automatic Drills there has never been one entirely satisfactory, because no one strength of spring in these tools would answer in both soft and hard woods, or for large and small drills furnished. A spring of average strength had to be used. The cap on top of Drill has a screw attached to it, by revolving which the spring is made longer or shorter, and as a result weaker or stronger. The spring is held at any desired tension by a small bolt engaging in cap and operated by the small knob on side of handle. The Drill has eight drill points, 1/16 to 11/64, in magazine in handle, arranged to show all in plain sight. Entire length of tool, inclusive of drill points, 11¼ inches.

	Per Dozen	Each
One in box	$32.40	$3.00
Extra drill points for Nos. 41 and 44		.12
Set of 8. Sizes, 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4 and 11/64 inch	Per Set,	.90

Hand Drills

M. F. Co.

Single Speed

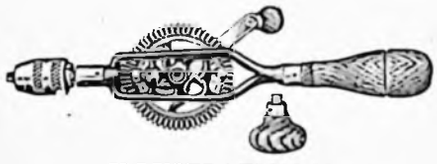


ILLUSTRATION No. 1

Cocobolo wood; malleable iron frame; large gear and frame black enameled; other metal parts nickeled. Hollow end handle with screw cap, containing 8 wood boring points ranging in size from 1/16 to 11/64 inch in diameter. Removable side, grip handle. Cut gears with adjustable equalizing bearing. Ball thrust bearing. Three-jawed chuck holding and centering accurately, round shank drills from 0 to 3/16 inch in diameter. Length, 12½ inches.

Including 8 fluted drill points.....Each, $2.60
Packed one in a pasteboard box.

Single Speed

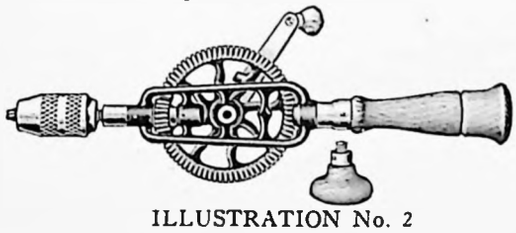


ILLUSTRATION No. 2

Cocobolo wood; malleable iron, black enameled frame; large gear painted red; other metal parts nickeled. Hollow end handle, with screw cap, shaped so tool may be used as a breast drill, and containing 8 wood boring points, ranging in size from 1/16 to 11/64 inch in diameter. Removable side, grip handle. Cut gears with adjustable friction roll to equalize bearings. Ball thrust bearing. Chuck of star pattern with three jaws opening with springs and closing evenly on, and centering accurately round, shanks from 0 to 3/8 inch in diameter. Length, 14½ inches.

Including 8 fluted drill points.....Each, $3.75
Packed one in a pasteboard box.

Hand Drills

M. F. Co.

Changeable Speed

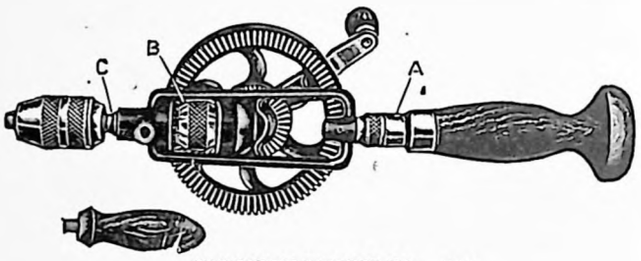


ILLUSTRATION No. 980

Choice stained hardwood. Hollow end handle with receptacle for holding twist drills, detached by loosening a knurled check nut and pressing on the plunger at A, shown in illustration, of shapely design with mushroom head, so tool may be used as a breast drill. Malleable iron frame; large gear painted French gray with red stripe; other parts nickeled. Removable side, grip handle.

Instantly changeable speed, 1½ to 1 and 4 to 1, operated by shifting knurl ring B under any conditions and without removing the bit from the work.

Pinion and shifting device of steel and inclosed for protection.

Cut gears with adjustable friction roll to equalize bearings.

Ball thrust bearing at point marked C in illustration.

Chuck of Star pattern with three jaws opening with springs and closing evenly on, and centering accurately round, shanks from 0 to ⅜ inch in diameter.

Length, without handle, 10 inches; with handle, 15¼ inches.

Each $4.10

Packed one in a pasteboard box.

No. 1980, with Ratchet

The same as Drill No. 980, shown above, except provided with simple and effective ratchet, operated by raising and turning to the right or left the cap to a small boss on the crank handle. This is a convenience in cramped places or in doing delicate work. Packed one in a pasteboard box.

Each $5.00

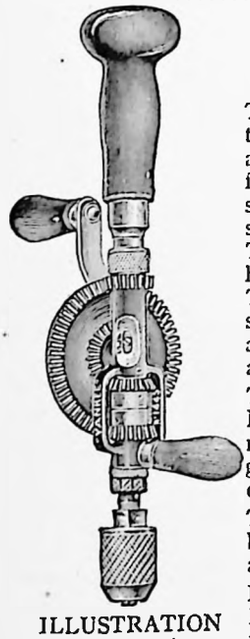


ILLUSTRATION No. 1445

Yankee

Changeable Speed

These are of the same construction as the Ratchet styles, but without the ratchet movements. Special attention is called to the very quick and easy change in speed made by the small shifter on the main frame between small gears—with shifter at top notch S it is set for slow speed, at bottom notch F fast speed, in center notch L the spindle is locked so the chuck can be readily opened and closed. They are strong and substantially built for hard work and durability, have adjustable ball bearings on spindle to take up all strain or wear. The side handle can be unscrewed and has screw driver bit to fit screws in drill. The frame is of malleable iron, spindle of steel turned and fitted, all gears have cut teeth to run smoothly and accurately and of extra strength.

The drills are finished in dead black color with bright parts polished. No. 1445. With three-jaw chuck. Jaws are of tool steel and hold round shank drills only up to ⅜ inch in diameter inclusive. Large gear is 4 inches, small gear 1⅝ inches, gears on spindle 1¼ inches diameter; all have extra strong cut teeth.

The wood handle is 4½ inches long, 2½ inches in diameter, and can be detached from frame by milled nut, to use interior of handle as a magazine for drills.

Entire length of drill, 15 inches. Net weight, 3½ pounds.

Packed one in heavy paper box.

No. 1445. Each $6.50

Hand Drills

Yankee

Single Speed

ILLUSTRATION
No. 1430

With three-jaw chuck to hold round shank drills only up to $\frac{7}{16}$ inch diameter, inclusive. Large gear is $3\frac{1}{8}$ inches, small gears on spindle $1\frac{7}{16}$ inches diameter, all have extra strong cut teeth.
The wood handle is 4 inches long, $1\frac{1}{2}$ inches diameter, and can be detached from frame by milled nut, to use interior of handle as a magazine for drills.
The thrust on spindle is taken by hardened steel bearing in lower end of frame, in place of ball bearings, and so arranged that any wear can be readily taken up.
Entire length of drill is $10\frac{1}{2}$ inches. Net weight, $1\frac{1}{4}$ pounds.

Packed one in heavy paper box.

No. 1430 Each $3.60

Ratchet Changeable Speed

With three-jaw chuck to hold round shank drills only up to $\frac{3}{8}$ inch diameter, inclusive. Large gear is $4\frac{1}{2}$ inches, small gear $1\frac{1}{4}$ inches diameter.
The wood handle is $4\frac{1}{2}$ inches long, $2\frac{1}{2}$ inches diameter, and can be detached from frame by milled nut, to use interior of handle as a magazine for drills.
Entire length of drill is $16\frac{1}{2}$ inches. Net weight, $4\frac{1}{4}$ pounds.

Packed one in heavy paper box.

No. 1545 Each $9.65

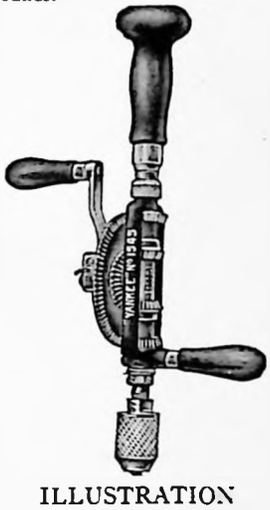


ILLUSTRATION
No. 1545

Breast Drills

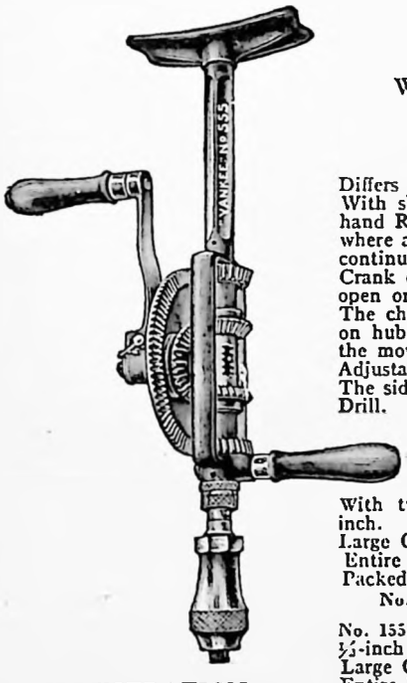


ILLUSTRATION
No. 555

Yankee

Ratchet Changeable Speed
With Right and Left-hand and Continuous Ratchet Movements

No. 555

Differs from all others in what it will do and how it does it.
With slide in first notch (at top), it is a Plain Drill, in second a Left-hand Ratchet, in third a Right-hand Ratchet, in fourth a Double Ratchet where any movement of Crank forward or backward causes the Drill to cut continuously, a time saver and convenience when working in corners where Crank cannot be turned. In fifth (at bottom) Gearing, etc., is locked to open or close Chuck.
The change of speed, fast or slow, is made by simple movement of lever on hub or Gear and without removing Drill from work and with any of the movements named above.
Adjustable Ball Bearings take all strain or thrust.
The side handle can be unscrewed and has Screwdriver Bit to fit screws in Drill.

The Frame is malleable iron, finished in dead black japan. The Chuck body is malleable iron, polished and nickel-plated. The Jaws of steel, drop forged and hardened. The Spindle is of steel and gears are cast iron with cut teeth.
With two Jaw Chuck to hold round and square shank drills up to $\frac{1}{2}$ inch.
Large Gear is $5\frac{1}{4}$ inches, small Gear $1\frac{7}{8}$ inches diameter.
Entire length of Drill is 18 inches. Net weight, $6\frac{1}{2}$ pounds.
Packed one in heavy paper box.

No. 555 Each $11.20

No. 1555 With three Jaw Chuck to hold round shank drills only up to $\frac{1}{2}$-inch diameter, inclusive.
Large Gear is $5\frac{1}{4}$ inches, small Gear, $1\frac{7}{8}$ inches diameter.
Entire length of Drill is 18 inches. Net weight, $6\frac{1}{2}$ pounds.
Packed one in heavy paper box.

No. 1555 Each $11.20

Breast Drills

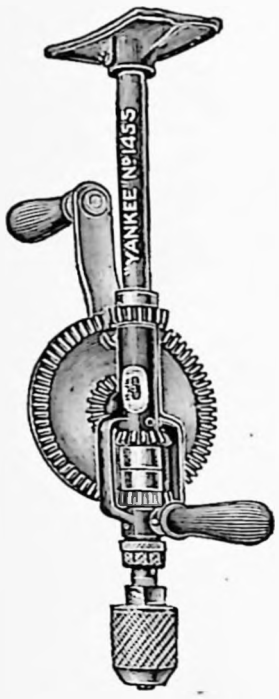


ILLUSTRATION
No. 1455

Yankee

Changeable Speed

No. 455 With Two-Jaw Chuck. Jaws (alligator pattern) are drop-forged of steel, and hold square shank Drills up to ½ inch. Large Gear is 5 inches, small Gear is 1⅞ inches, and Gears on Spindle 1½ inches diameter; all have extra strong cut teeth.
Entire length of Drill is 17¼ inches. Net weight, 5½ pounds. Packed one in heavy paper box.
Each $7.50

No. 1455 With Three-Jaw Chuck. Jaws are of tool steel and hold round shank Drills only, up to ½-inch diameter inclusive. Large Gear is 5 inches, small Gear 1⅞ inches, and Gears on Spindle 1½ inches diameter; all have extra strong cut teeth.
Entire length of Drill is 16½ inches. Net weight, 5½ pounds. Packed one in heavy paper box.
Each $7.50

M. F. Co.

Changeable Speed

Each of these drills has its distinctive operations, though all are constructed on the same general plan. They are so designed as to practically eliminate the loss of power by running each driving gear on its own independent bearing, thus adding largely to the power, and a careful comparison by way of actual test will demonstrate this fact.

ILLUSTRATION
No. 12
IMPROVED

No. 12 Improved

Cocobolo handles, large gear and breast plate painted green and malleable iron main stock enameled black; chuck and crank nickeled. Breast plate adjustable to different positions and removable. Patent level attachment. Cut gears, large gear with idler roll to equalize bearings. Ball-thrust bearing. Extensible crank with radius from 4 to 6 inches, adding to the power of the tool. Changeable speed from even to 3 to 1. Master chuck holding round shanks from ⅛ to ½ inch in diameter; all sizes of bit stock and No. 1 taper shanks. Length, 17½ inches.

No. 12 Each $4.17

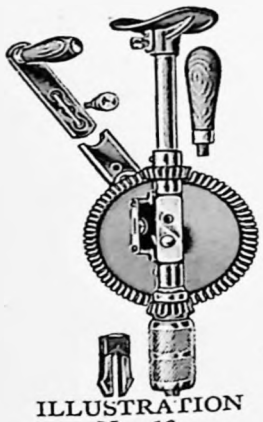


ILLUSTRATION
No. 13

No. 118

Same as No. 12, except that chuck is star pattern.
Each $4.74

Single Speed No. 13

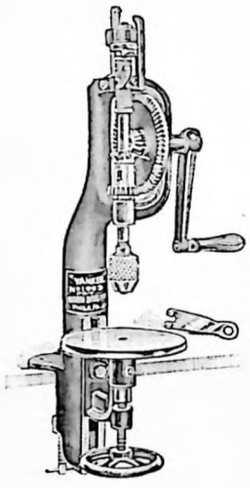
Cocobolo handles, solid steel main stock, large gear and under side of breast plate painted red; other metal parts polished and nickeled. Breast plate adjustable to different positions and removable. Extensible crank with radius of 5½ to 7 inches, adding to powers of the tool. Cut gears, large gear 6 inches in diameter, giving speed of 4½ to 1, idler roll to equalize bearings. Patent level attachment. Ball-thrust bearing. Master chuck holding round shanks from ⅛ to ½ inch in diameter; all sizes of bit stock and No. 1 taper shanks. Length, 15 inches.
No. 13 Each $5.23

Above prices are subject to change without notice

Bench Drills

Yankee

Cast Iron Frame, Dead Black Finish Gears and Pinions cut from solid steel; Steel Feed Screw has square threads; Ball Bearings at lower end; fitted with bracket to throw off ratchet feed at extreme up and down movement. Wrench with each drill.



Automatic Feed
Two Speed

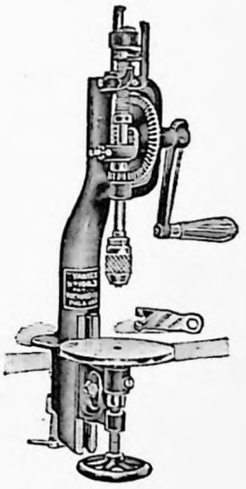
Speed quickly changed by moving shifter on spindle to top notch; fast speed geared 64 to 18 and slow speed 14 to 14; one turn of crank turns chuck 3½ times; table is adjustable up to 5 inches and has an independent movement of 1¾ inches by means of hand wheel and screw.

Diameter of table, 6¾ inches; diameter of large gear wheel, 5¾ inches; $\frac{5}{16}$-inch spindle; three-jaw chucks, 2¾ inches long; $1\frac{5}{8}$ inches diameter; height over all, 28 inches; weight, each, about 57 pounds.

No. 1005 Each $23.50

Single Speed

Geared 49 to 14; chuck revolves 3½ times to one turn of crank; small lever on arm locks spindle to open and close chuck; table is adjustable up to 2¾ inches and has independent movement of 1½ inches by means of hand wheel and screw.



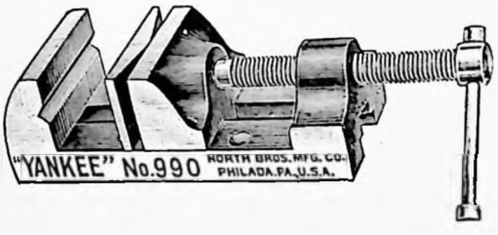
Diameter of table, 4¾ inches; diameter of large gear wheel, 3⅜ inches; ⅜-inch spindle; three-jaw chuck, 1¾ inches long; 1 inch diameter; height over all, 18¾ inches; weight, each, about 20 pounds.

No. 1003 Each $14.00

One in a Wooden Box

Yankee Vise for Above Drills

No. 990



Designed for use on Yankee Bench Drills, or separately attached to bench.

The body and sliding jaw are of cast iron, accurately machined to hold work square, when used either flat or on sides. The sliding jaw has a T-shaped block screwed to its under side, sliding in a T-shaped slot $\frac{5}{16}$ inch wide, insuring parallel movement of jaw.

A removable swivel jaw is provided to hold taper work, and is made of steel, case hardened. The stem has a friction spring to hold jaw in position. The adjusting screw is of steel ½-inch diameter with ¾-inch head to receive sliding bar. The boss on end of body in which screw works is ⅞-inch long. Two countersunk holes are provided in base to screw vise to bench if desired.

The base of vise is 6 inches long and 2⅜ inches wide. Extreme height, 2 inches. The opening of jaws, without swivel jaw, is 3 inches, with swivel jaw 2⅝ inches. Depth of jaws, 1⅜ inches. Weight of vise, 3¾ pounds.

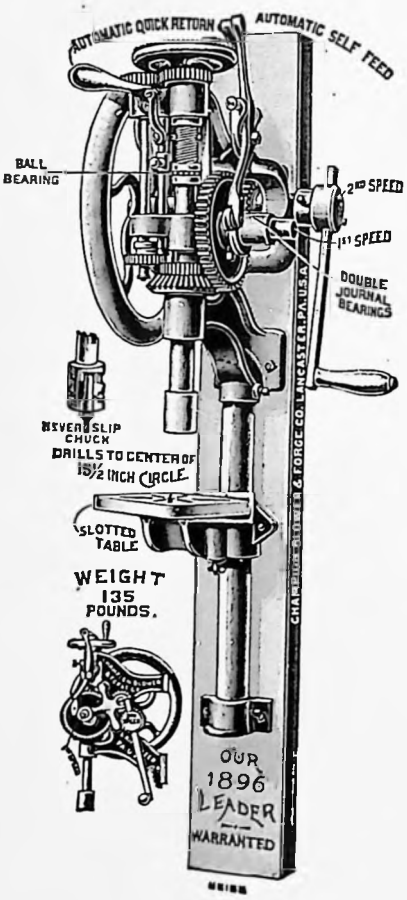
Packed one in paper box, measuring 7⅜ x 3⅛ x 2⅛. Net weight, 4 pounds; gross weight, 4 pounds, 3 ounces.

No. 990 Each $3.20

Blacksmiths' Post Drills

Champion

No. 96—Self-Feed with Automatic Quick Return

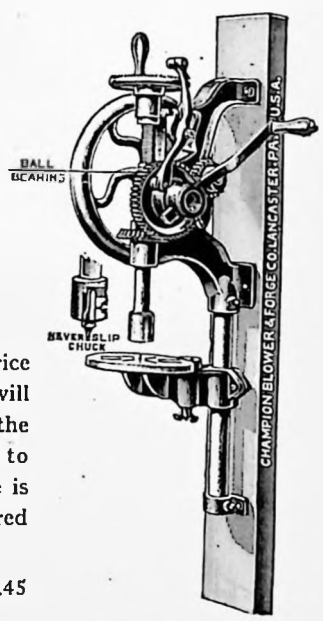


The quick-return lever is thrown into place while the drill continues in motion, where it remains until the bit is raised out of the work, when it automatically stops, requiring no attention from the operator, and is ready to start the next hole.

It is back-geared with improved third-gear principle. The crank has a forward motion on both 1st and 2d speed, the third gear being part of the handle hub and only in use as a gear when on the 2d speed, thus saving the continuous labor of pulling along an intermediate or third gear while working the first speed.

Drills to the center of 15½-inch circle. All gears are protected with double-journal bearings. All bearings are ground to a working fit out of the solid metal, precisely like all drills costing from $100 to $500. It has two speeds. Will drill from $\frac{1}{16}$ to 1½ inch hole. Spindle bored regularly to take ½-inch straight shank drills, furnished to take $\frac{3}{4}$ inch if specially ordered. Weight, 135 pounds.

No. 96 Each $21.00



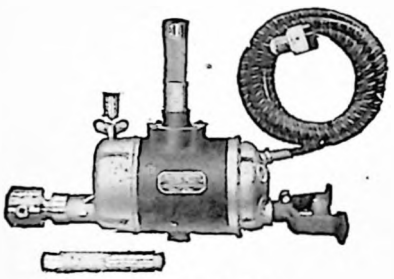
No. 101—Self-Feed

Built to furnish an automatic self-feed drill at the lowest price possible. Has back gears and slotted lathe-turned table. It will drill to the center of a 12-inch circle. It has one speed for the crank. The spindle is ⅞-inch in diameter. It drills holes up to ¾-inch and has an up-and-down run of 3 inches. The spindle is bored for ½-inch straight shank drills. When specially ordered will be bored for ⅝ or $\frac{3}{4}$ inch. Weight, 80 pounds.

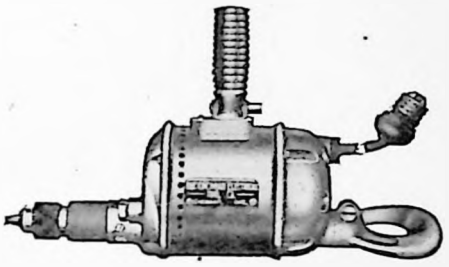
No. 101 Each $9.45

Electrical Drills

The Cincinnati Air-Cooled



No. UH, UD



No. U, UT

Portable Universal

Made with an all-aluminum housing and end caps, giving lightness in weight with durability and power.

A drill wound for 110 volts can be used on either direct or alternating current of the same voltage; 60 cycles, single phase.

A drill wound for 220 volts can be used on either direct or alternating current of the same voltage; 60 cycles, single phase.

Where only one current is used, viz., either direct or alternating, it is preferable to have a motor wound for that particular current.

One-quarter-inch drills furnished with one side handle, which operates the switch.

Three-eighths-inch and ½-inch drills furnished with two side handles, one detachable for close corner work.

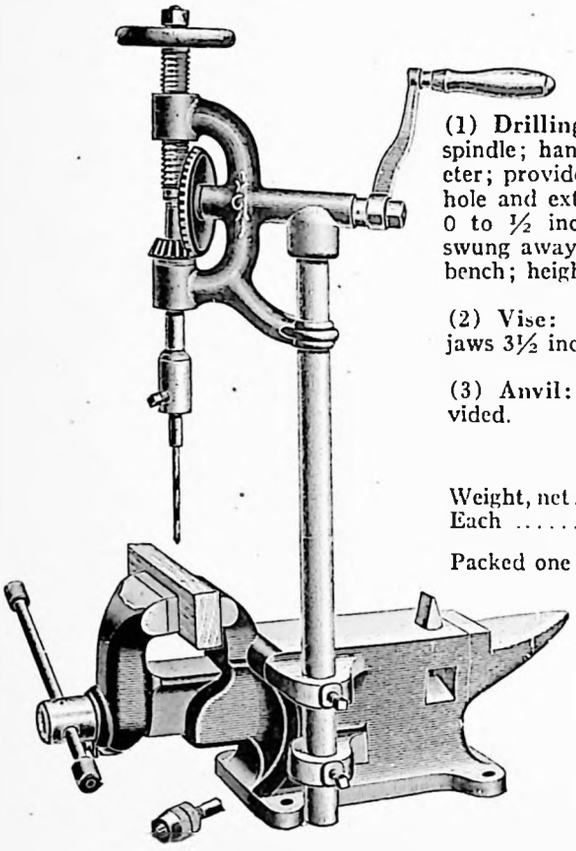
Order by Type, Current and Volts

If alternating, give Cycle and Phase.

Type	Capacity in Steel, Inches	Weight, Pounds	Speed, R. P. M.	Motor Diameter and Length Over All, Inches	Each
U	¼	7	1000	4 x 14	$68.00
UT	⅜	16	800	4¾ x 15	80.00
UH	½	18	500	5 x 16	94.00
UD (2 speed)	½	19	450–750	5 x 16½	100.00

All drills up to ½-inch capacity, inclusive, are fitted with chucks. Taper socket instead of chuck with ½-inch drills if desired. Screw-feed furnished as an extra. Special slow speed for drilling in marble, glass or slate. Capacities as given are for drilling in metal. Mention if intended for other work. Any drill will bore larger size holes in wood than to given capacity. Brace bit chuck to carry auger bits furnished if desired. Weights given are for direct current. Alternating current drills are slightly heavier.

Anvil, Vise and Drill



(1) **Drilling Attachment:** Steel standards and spindle; hand feed; socket hole ½-inch in diameter; provided with one ¼-inch drill to fit socket hole and extra chuck to hold round shanks from 0 to ½ inch in diameter; attachment may be swung away from vise and work done below the bench; height of standard, 24 inches.

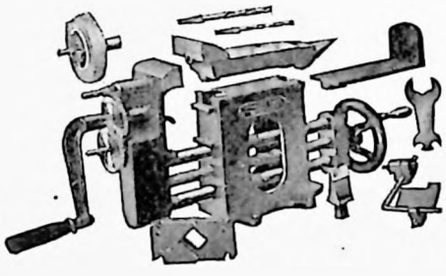
(2) **Vise:** Of best material and construction; jaws 3½ inches wide with inserted steel faces.

(3) **Anvil:** Steel face 4 x 8 inches; hardie provided.

	Anvil, Vise and Drill	Anvil and Vise	Drilling Attachment
Weight, net...	80 lbs.	60 lbs.	20 lbs.
Each	$39.75	$22.40	$16.70

Packed one in a wooden box.

The Stewart Handy Worker



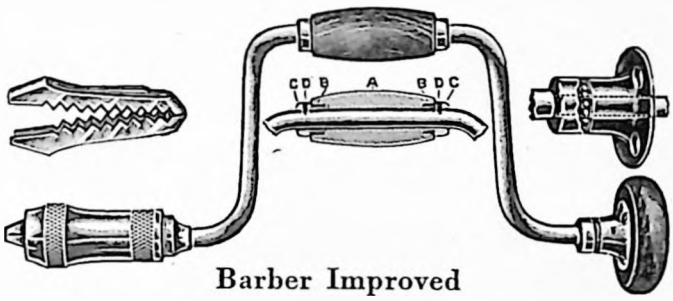
Six Tools in One Sturdy Device

Comprises a drill press, powerful vise, pipe vise, anvil, metal cutter, and a substantial three-speed machine with clamp spindle for operating emery wheels, scratch brushes, buffing wheels, etc. This ninety-pound outfit, complete with all tools and attachments illustrated, packed in a substantial case.

Each $17.75

Bit Braces

M. F. Co.



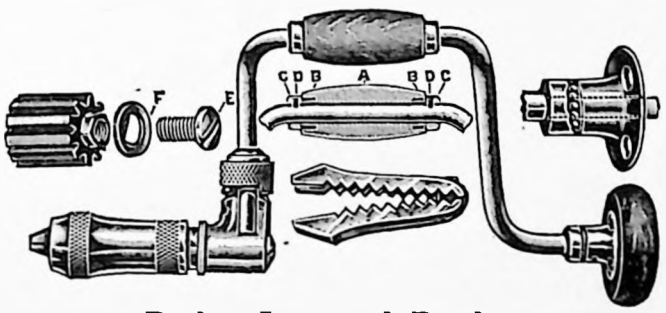
Barber Improved
Plain

Polished and nickeled steel; cocobolo wood. Ball-bearing head. Non-splitting, always free acting sweep handle with inserted steel rings (B) and adjustable bearings (C) clamped with screws (D). Forged steel alligator jaws holding bit stock and many sizes of round and irregular shanks.

Nos.	12	13
Size of sweep, inches	10	8
Each	$2.70	$2.60

Polished and nickeled steel; stained hardwood. Brass rings inserted in sweep handle. Forged steel alligator jaws.

Nos.	222	223
Size of sweep, inches	10	8
Each	$1.80	$1.75



Barber Improved Ratchet

Polished and nickeled steel; cocobolo wood. Ball-bearing head. Non-splitting, always free acting sweep handle with inserted steel rings (B) and adjustable bearings (C) clamped with screws (D). Covered ratchet teeth with exposed ratchet dogs. Patent cup washer (F) and screw (E) to hold chuck to sweep without working loose. Forged steel alligator jaws holding bit stock and many sizes of round and irregular shanks.

Nos.	31	32	33	34
Size of sweep, inches	12	10	8	6
Each	$3.65	$3.55	$3.45	$3.45

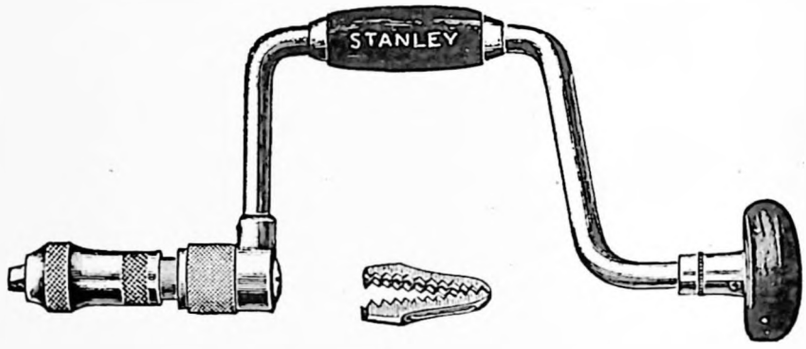
Open ratchet. Ball-bearing head. Polished and nickeled steel; stained hardwood. Brass rings inserted in sweep handle. Forged steel alligator jaws.

Nos.	322	323
Size of sweep, inches	10	8
Each	$2.95	$2.90

Bit Braces

Stanley

Heads and handles of cocobolo. Heavily nickel-plated. Ball-bearing heads, with the wood screwed on to the large spindle and three small screws preventing its working loose, and likewise containing a ball thrust. Hardened steel alligator jaws.



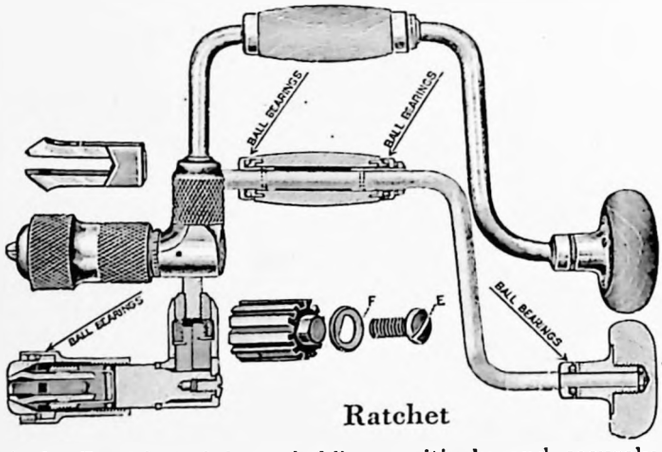
Ratchet

Concealed Ratchet in which the cam ring governs the ratchet, and, being in line with the bit, makes it more convenient in handling than when it is at right angles. The ratchet parts are entirely enclosed, thus keeping out moisture and dirt, retaining lubrication and protecting the user's hands. The ratchet mechanism is interchangeable, may be taken apart by removing one screw, and is readily put together again. The two-piece clutch, which is drop-forged, machined and hardened, is backed by a very strong spring, insuring a secure lock. When locked, ten teeth are in engagement, while five are employed when working as a ratchet.

No. 921

Sweep, inches	8	10	12	14
Each	$3.40	$3.50	$3.60	$3.75

M. F. Co. "Lion"



Ratchet

Polished and nickeled steel; rare tropical wood. Ball-bearing head. Non-splitting, adjustable ball-bearing, always free acting sweep handle. The ball-bearing feature is of much importance in operation of the tool. Covered, dust-protected ratchet parts. Patent cup washer (F) and screw (E) to hold chuck to sweep without working loose. Unbreakable jaw socket made from bar steel. Chuck shell ball-bearing, with case-hardened hood and with powerful grip upon bit shanks and easily released when desired. Forged steel jaws, holding positively and securely, and centering with reasonable accuracy, round shanks from ⅛ to ½ inch in diameter, No. 1 Morse taper, and all sizes of bit stock and expansion bit shanks.

Nos.	870	871	872
Size of sweep, inches	14	12	10
Each	$5.35	$5.20	$5.10

 Above prices are subject to change without notice

Screw Drivers

H. S. & Co.

The H. S. & Co. "New Century" Screwdriver is fully warranted. The blade is high-grade tool steel, carefully tempered, and the handle is polished hardwood especially shaped to give a firm, easy grip. Each tool is thoroughly tested before it leaves the factory.

Regular

ILLUSTRATION No. 100

Length of blades, inches.....	2½	3	4	5	6	8	10	12
Per dozen.....	$3.02	$3.24	$3.46	$4.10	$4.64	$5.62	$6.48	$6.70
Each	.28	.30	.32	.38	.43	.52	.60	.62

Slim Blade

ILLUSTRATION No. 120

Length of blades, inches.....	3½	4½	5½	6½
Per dozen	$3.00	$3.67	$4.32	$5.18
Each	.28	.34	.40	.48

Yankee

These are strong, durable, well balanced tools, of high quality material and workmanship, each one being thoroughly tested and guaranteed in every particular as to quality.

The fastening of blade and handle is such that they cannot be loosened in proper use, or even with usual abuse.

The blades and ferrules are finely polished and the handle of hard wood is finished in dull dead black, making a handsome appearance as well as being durable.

Regular

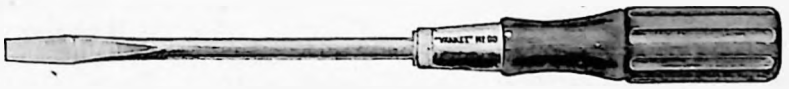


ILLUSTRATION No. 90

Length of blades, inches	1½	2	3	4	5	6	7	8	9	10	12	15
Diam.of blade, inches	3/32	3/32	3/32	1/4	1/8	1/8	3/8	3/8	3/8	1/8	1/8	1/8
Per dozen	$3.70	$3.70	$4.10	$4.75	$5.95	$6.80	$7.70	$9.00	$9.70	$11.00	$12.75	$17.15
Each	.34	.34	.38	.44	.55	.63	.71	.83	.90	1.02	1.18	1.59

Slim Blade

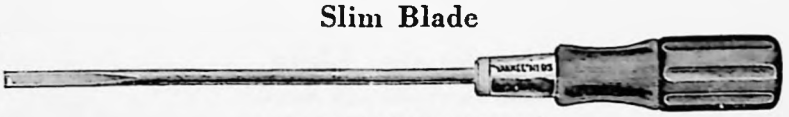


ILLUSTRATION No. 95

Length of blades, inches.....	2½	3½	4½	5½	6½	7½	8½
Diameter of blades, inches.....	1/8	1/8	1/8	1/8	1/8	5/32	5/32
Per dozen	$3.70	$4.10	$4.65	$5.29	$5.95	$6.60	$7.25
Each	.34	.38	.43	.49	.55	.61	.67

Screw Drivers

Perfect Handle

The entire metal part is solid steel drop-forging. The head is shaped into a hammer, which may be used to start screws into wood, or the driver may be used with a hammer to loosen rusty screws. Each point is tested in a special machine built for that purpose. Each wooden handle is riveted on, locked in under pressure, and carefully waterproofed. Every Perfect Handle Tool is guaranteed in every way by the maker.

No. 609 Before wooden handles are attached, showing one-piece steel drop-forging.

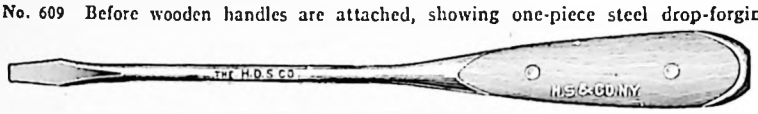


ILLUSTRATION No. 609

Length of blade, inches....	2	2½	3	4	5	6	7	8	10	12
Diam. of blade, inches....	¼	¼	¼	¼	¼	5/16	5/16	5/16	⅜	⅜
Per dozen	$3.00	$3.15	$3.45	$3.70	$4.32	$5.20	$5.95	$6.80	$8.55	$10.25
Each	.28	.29	.32	.34	.40	.48	.55	.63	.79	.95

"Hurwood" Stanley

The blade, shank and head of Hurwood Screwdrivers are one-piece of special steel. Two projecting wings under the head together with rivet which passes through ferrule, handle and shank, securely fastens blade in handle, preventing its turning. These Drivers are made in two forms. One, in which the metal blade runs clear through the handle, and the other designed for electricians, possessing equal strength but having the metal head countersunk in the handle and insulated with non-conducting plug. All blades are finely tempered, the handles fluted and stained black and drivers are well finished throughout.

ILLUSTRATION No. 20

ILLUSTRATION No. 54

Nos. 51½, 52½ and 53½ Machinists

(Blade runs through handle)
Made with Hexagon Shank for use with a Wrench

Nos.	Length of Blade, In.	Diam. of Blade, In.	Tip of Blade, In.	Per Doz.	Each
51½	1½	3/16	5/32	$5.83	$0.54
52½	2¾	7/32	3/16	8.86	.82
53½	3¼	½	½	11.02	1.02
54	10	½	½	22.03	2.04

Construction of Nos. 20 and 50

No. 20 Regular

(Blade runs through handle)

Length of Blades, Inches	Diam. of Blade, Inch	Tip of Blade, Inch	Per Doz.	Each
2½	7/32	5/32	$2.48	$0.23
3	9/32	7/32	2.80	.26
4	¼	9/32	3.46	.32
5	5/16	11/32	4.00	.37
6	5/16	¼	4.86	.45
8	3/8	5/16	5.94	.55
10	3/8	3/8	7.45	.69
12	3/8	3/8	8.64	.80

No. 50 Slim Blade

(Blade runs through handle)

Designed for light and delicate work. The blades are 5/32 inch in diameter with ⅛ inch tip. The handles are short and of small diameter, to fit the palm of the hand, permitting the workman to use his thumb and forefinger near the blade when turning screws requiring delicate adjustment. They are, however, very strong and durable, being made with the two projecting wings and rivet as described above.

Length of blade, inches	1½	2½	3	4	5	6	8
Per dozen	$2.48	$2.48	$2.80	$3.46	$4.00	$4.86	$5.94
Each	.23	.23	.26	.32	.37	.45	.55

Screw Drivers

H. S. & Co.

Clock

Round Rosewood Handle

	Per Dozen	Each
No. 1 2-inch blade	$3.67	$0.34
No. 1 3-inch blade	3.67	.34

Pocket

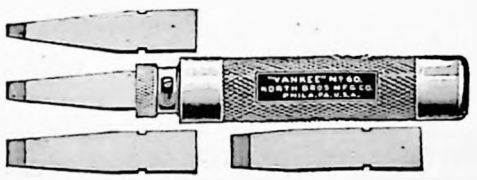
Octagon Rosewood Handles

ILLUSTRATION No. 10

Length of blades, inches	1	2	3
Per dozen	$3.05	$3.05	$3.05
Each	.28	.28	.28

Pocket Magazine Screw Driver

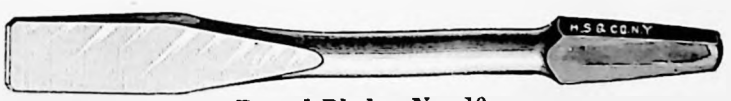
Yankee



No. 60—Has four blades to suit different size screws. Blades are kept in magazine in handle. Tool weighs only 2 ounces and measures closed 3 inches long and 5/8 diameter, and is the only small and convenient pocket screw driver made with assorted width blades. Made of steel, polished and nickel-plated. Net weight per dozen, 1½ pounds. One dozen in box.

Each $1.05

Screwdriver Bits



Round Blade—No. 10

Forged from crucible steel, oil tempered and polished. Order by face.

H. S. & Co.

Width of Face, inches	1/4	5/16	3/8	7/16	1/2	5/8	3/4
4-inch Blade, Per Dozen	$2.50	$2.70	$2.70	$3.05	$3.25	$3.68	$3.90
Each	.23	.25	.25	.28	.30	.34	.36
9-inch Blade, Per Dozen	4.32	4.32	4.32				
Each	.40	.40	.40				

Stanley No. 26

Width of Face, inches	1/4	5/16	3/8	1/2	5/8	3/4
Length, inches	4½	4¾	5	5	5	5
Per dozen	$2.05	$2.16	$2.27	$2.38	$2.49	$3.00
Each	.19	.20	.21	.22	.24	.28

Screw Drivers

Yankee

Spiral Ratchet

Rods are of steel, the spiral grooves milled. The nuts are hard brass and accurately fit spiral grooves in spindle. All drivers are furnished with three bits of varying widths and thickness, made from best cast steel, tempered, ground and polished. Every bit is thoroughly tested before leaving factory. Metal parts are nickel-plated and buffed. Handles made of hardwood, smoothly finished.

ILLUSTRATION No. 30

Right or Left Hand or Rigid

The spindle has two spirals, one right and one left, with corresponding nuts. To drive screws the shifter is moved to end of slot toward bit; to draw screws, it is moved to end of slot toward handle. Screws can be ratcheted in or out by turning the handle as in a ratchet screwdriver. It can also be made rigid with spindle fully extended and shifter midway between ends of slot. In this position it becomes especially effective as a long screwdriver to reach out-of-the-way places. 13½ inches long when closed; 5½-inch stroke.

Each $2.75

No. 130 Same as No. 30, with spring in handle, causing it to automatically come back for the next push. Can be worked with one hand and in inaccessible places.

Each $3.35

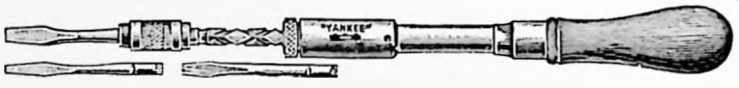


ILLUSTRATION No. 31

Same as No. 30, but heavier and stronger throughout, for large screws. 17½ inches long, including bit when closed; 8½-inch stroke.

Each $3.95

No. 131 Heavier pattern of No. 31 with spring added in the handle.

Each $4.50

ILLUSTRATION No. 35

Similar to No. 30, but lighter for small screws and to carry in pocket. 7 inches long without bit, weighs less than 7 ounces.

Each $2.20

No. 135 Quick return. Same as No. 35, but with spring in handle, causing it to automatically come back for the next push. Can be worked with one hand and in inaccessible places.

Each $2.60

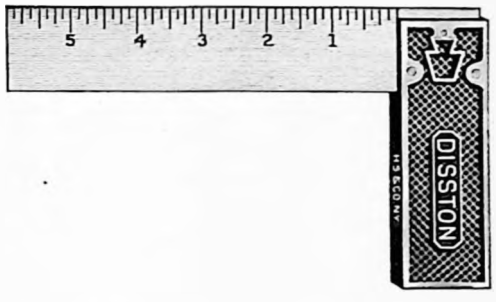
Squares

Disston

Try

No. 5½ Iron stock, hardened and tempered steel blade, square inside and out.

Size, inches	4	6	8	10	12
Per dozen	$5.50	$7.13	$8.00	$10.48	$12.42
Each	.51	.66	.74	.97	1.15

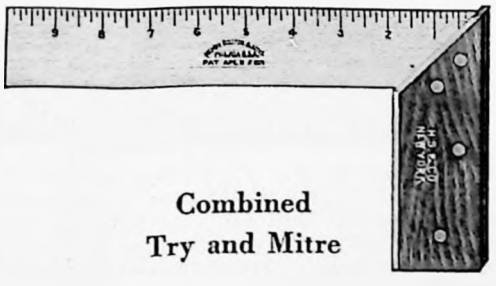


Try

Rosewood stock, brass faced, tempered steel blade.
Graduated in millimeters, both sides, or millimeters one side and inches on other side, without extra charge, if specially ordered.

No. 1

Size, inches	3	4½	6	7½	9	10	12	15	18
Per dozen	$4.54	$5.18	$6.81	$7.34	$9.50	$10.26	$12.78	$16.00	$21.60
Each	.42	.48	.63	.68	.88	.99	1.18	1.48	2.00



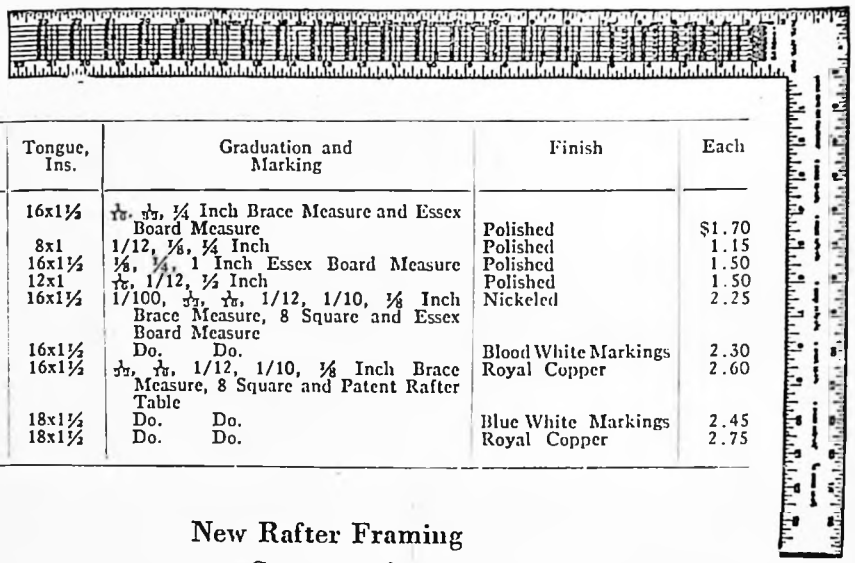
Combined Try and Mitre

No. 10 Rosewood stock. Heavy brass face plate, tempered steel blade.

Size, inches	6	7½	9	12
Per dozen	$7.88	$9.10	$10.80	$13.82
Each	.73	.84	1.00	1.28

Steel Squares

Sargent
Carpenters'



Nos.	Body, Ins.	Tongue, Ins.	Graduation and Marking	Finish	Each
3	24x2	16x1⅛	1/16, 1/12, ¼ Inch Brace Measure and Essex Board Measure	Polished	$1.70
10	12x1½	8x1	1/12, ⅛, ¼ Inch	Polished	1.15
14	24x2	16x1½	⅛, ¼, 1 Inch Essex Board Measure	Polished	1.50
30	18x1½	12x1	1/16, 1/12, ½ Inch	Polished	1.50
100N	24x2	16x1½	1/100, 1/32, 1/16, 1/12, 1/10, ⅛ Inch Brace Measure, 8 Square and Essex Board Measure	Nickeled	2.25
100B	24x2	16x1½	Do. Do.	Blood White Markings	2.30
100C	24x2	16x1½	1/32, 1/16, 1/12, 1/10, ⅛ Inch Brace Measure, 8 Square and Patent Rafter Table	Royal Copper	2.60
100BR	24x2	18x1½	Do. Do.	Blue White Markings	2.45
100CR	24x2	18x1½	Do. Do.	Royal Copper	2.75

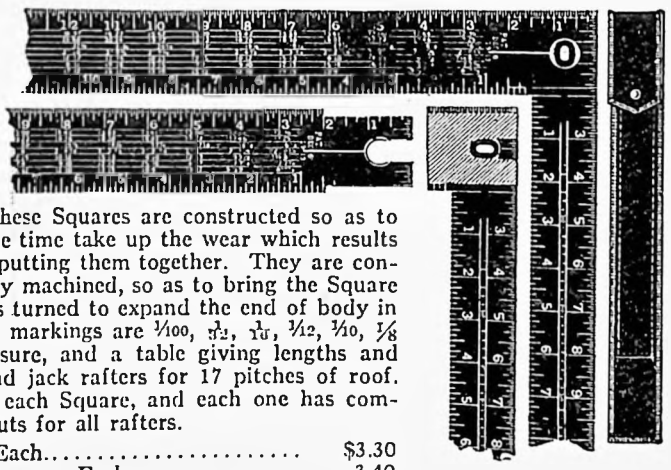
New Rafter Framing
Carpenters'

1/100, 1/32, 1/16, 1/12, 1/10, ⅛ inch markings, besides the regular markings. Full directions for using packed with each square.
Body is 24x2 inches, tongue 18x1¾ inches. Also made in 16-inch tongue if preferred.

No.	Finish	Each
500CR	Royal Copper	$3.15
500BR	Blued, White Markings	2.85

Nicholls

Take-Down With Expansion Fit Joint



Guaranteed to remain true. These Squares are constructed so as to assure accuracy, and at the same time take up the wear which results from taking squares apart and putting them together. They are constructed with bearings accurately machined, so as to bring the Square absolutely true when the cam is turned to expand the end of body in milled portion of tongue. The markings are 1/100, 1/32, 1/16, 1/12, 1/10, ⅛ inch, octagon scale, brace measure, and a table giving lengths and cuts of common, hip, valley and jack rafters for 17 pitches of roof. A rust-proof canvas case with each Square, and each one has complete rules giving lengths and cuts for all rafters.

No. 100A Oxidized copper. Each..... $3.30
No. 100N Nickel-plated on copper. Each..... 3.40

Adjustable Try and Mitre Square

Stanley

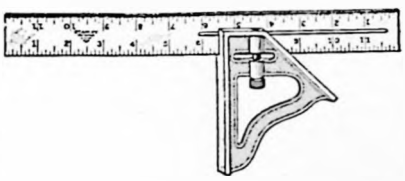


ILLUSTRATION No. 21

One of the handiest tools in a Carpenter's Kit. Especially useful for doing short work about windows, doors, etc., or in putting on butts or locks.

The Blade is adjustable and as it can be reversed, provides any size of try or mitre square within the capacity of the tool. In reversing, it is not necessary to remove the blade from the handle, consequently the tool is always assembled and ready for use.

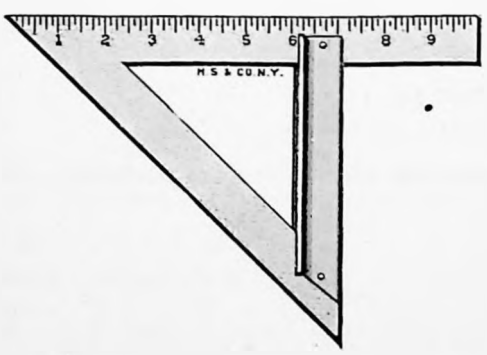
The locking device is such as to insure the blade being firmly and accurately secured at any point desired. The edges of the Blade are machined, graduated in 8th, 16th and 32nds of inches, and the tool is square inside and out.

It is also an excellent depth and marking gauge.

Both handle and blade are nickel-plated.

Length of Blade, inches	12
Weight, pound	¾
Per dozen	$12.10
Each	1.12

Combined Square and Mitre



No. 3 10-inch blade, all steel, nickel-plated.

Per dozen	$8.35
Each	.84

Sliding T Bevels

Disston

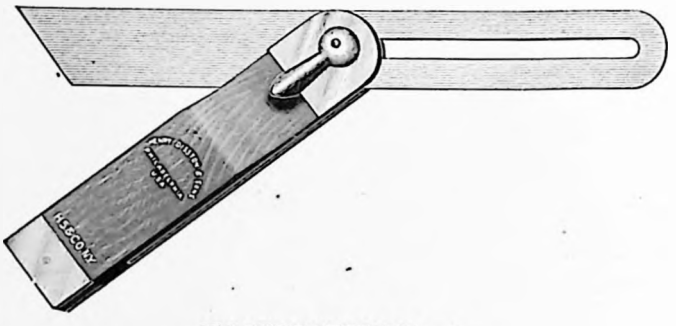


ILLUSTRATION No. 2

Rosewood stock, heavy brass-plated, hardened and tempered and blued steel blade.

Inches	6	8	10
Per dozen	$5.72	$6.48	$6.70
Each	.53	.60	.62

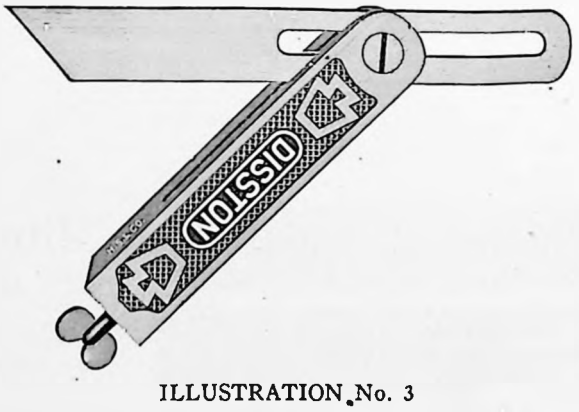


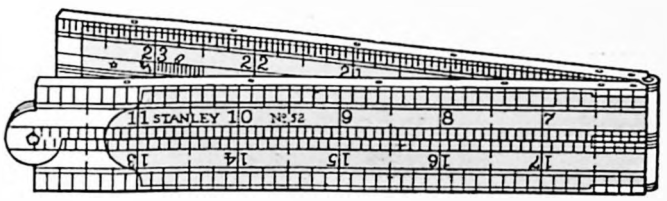
ILLUSTRATION No. 3

Nickel-plated iron stock, steel blade. The blade is easily secured by turning the thumb screw at the lower end of handle.

Inches	6	8	10
Per dozen	$8.64	$10.80	$11.88
Each	.80	1.00	1.10

Boxwood Rules

Stanley



Two-Foot, Four-Fold. ¾-Inch Wide

No.		Per Dozen	Each
62½	Square joint, bound, 8ths, 10ths, 12ths and 16ths	$8.10	$0.75

Two-Foot, Four-Fold. 1 Inch Wide

68	Round joint, middle plates, 8ths and 16ths	2.15	.20
61	Square joints, middle plates, 8ths and 16ths	3.02	.28
62	Square joint, full bound, 8ths, 10ths, 12ths, 16ths and drafting scales	8.10	.75
84	Square joint, half bound, 8ths, 10ths, 12ths, 16ths and drafting scales	6.48	.60

Two-Foot, Four-Fold. 1⅜ Inches Wide

70	Square joint, middle plates, 8ths, 16ths and drafting scales	4.00	.37

Two-Foot, Two-Fold. 1½ Inches Wide

18	Square joint, 8ths and 16ths	3.78	.35

Three-Foot, Four-Fold. 1 Inch Wide

66½	Arch joint, middle plates, 8ths and 16ths	6.05	.56
66¾	Arch joint, full bound, 8ths and 16ths	16.20	1.50

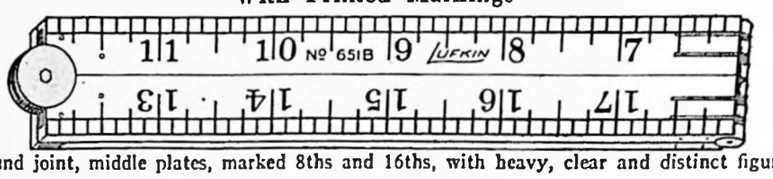
Four-Foot, Four-Fold. 1½ Inches Wide

94	Arch joint, full bound, 8ths and 16ths	26.25	2.43

Rules

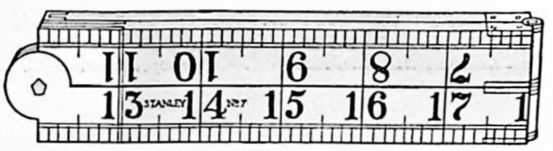
Boxwood

With Printed Markings



No. 651B Round joint, middle plates, marked 8ths and 16ths, with heavy, clear and distinct figures.
Per dozen $2.15
Each ..... .20

Blind Man



Two-Foot, Four-Fold	Per Dozen	Each
No. 7 Square Joint, 8ths and 16ths, 1⅛ inches wide	$11.00	$1.02

With Caliper Slide

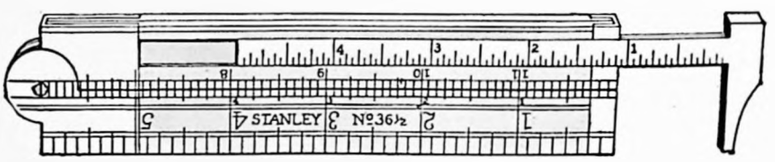


ILLUSTRATION No. 36½-R

All right hand as shown in illustration; the slide is graduated in 32nds.

Six-Inch, Two-Fold

No. 36 Square Joint, 8ths, 10ths, 12ths and 16ths. ⅞ inch wide when closed.
Per dozen $5.47
Each ..... .50

One-Foot, Four-Fold

No. 32 Arch Joint, edge plates, 8ths, 10ths, 12ths and 16ths. 1 inch wide when closed.
Per dozen $8.05
Each ..... .75

No. 32½ Arch Joint, full-bound, 8ths, 10ths, 12ths and 16ths. 1 inch wide when closed.
Per dozen $11.50
Each 1.07

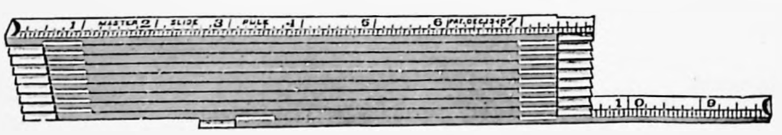
One-Foot, Two-Fold

No. 36½ Square Joints, 8ths, 10ths, 12ths and 16ths. 1⅜ inches wide when closed.
Per dozen $7.74
Each ..... .72

Two-Foot, Four-Fold

No. 62C Square Joint, full bound, 8ths, 10ths, 12ths and 16ths. 1 inch wide when closed.
Per dozen $14.90
Each 1.38

Master Slide Rule



Eight-Inch Folds. ½-Inch Wide

Designed for taking inside measurements of doors, windows, boilers, etc. One side of the rule reads inside measurements directly while the other is intended for ordinary measurements. Made of select boxwood and trimmed with brass-plated steel. Graduated in 16ths.

Feet	4	5	6
Number of folds	8	10	12
Each	$0.87	$0.95	$1.15

 Above prices are subject to change without notice.

Pocket Folding Rules

H. S. & Co.

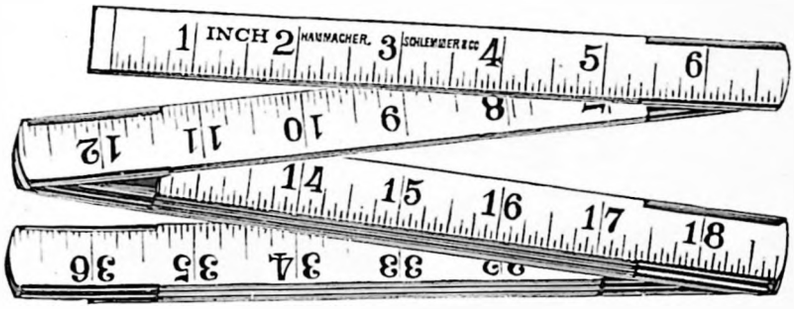


ILLUSTRATION No. 1513

4-Inch Folds, 7/16-Inch Wide

Concealed Spring Lock-Joints, Yellow Finish

Numbers	942	943	944
Feet	2	3	4
Number of folds	6	9	12
Graduated inches	1/16	1/16	1/16
Per dozen	$2.27	$3.35	$4.43
Each	.21	.31	.41

6-Inch Folds, 5/8-Inch Wide, Metal Tips

Concealed Spring Lock-Joints, as Illustrated, Yellow Finish

Numbers	1512	1513	1514	1514½	1515	1516	1518
Feet	2	3	4	4	5	6	8
Number of folds	4	6	8	8	10	12	16
Graduated inches	1/16	1/16	1/16	1/16	1/16	1/16	1/16
Per dozen	$1.51	$2.27	$3.02	$3.02	$3.78	$4.54	$6.05
Each	.14	.21	.28	.28	.35	.42	.56

Note—No. 1514½ graduated in millimeters as well as inches.

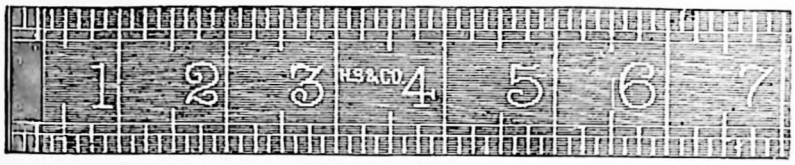
Stanley

6-Inch Joint, 5/8-Inch Wide, Metal Tips

Concealed Spring Lock-Joint, White Enamel Finish

Numbers	104	105	106	108
Feet	4	5	6	8
Number of folds	8	10	12	16
Graduated inches	1/16	1/16	1/16	1/16
Per dozen	$4.32	$5.40	$6.48	$8.64
Each	.40	.50	.60	.80

Wood Bench Rules



Nos. 40, 45, 50 and 60 graduated in 8ths on both sides; Nos. 200, 300, 400, 500 and 600 graduated in 8ths on one side and 16ths on other.

Nos.	Maple, Brass Tipped	Per Dozen	Each
40	4 feet long, 1¾ inches wide, ¼ inch thick	$17.28	$1.60
45	3¾ feet long, 1¾ inches wide, ¼ inch thick	12.96	1.20
50	5 feet long, 1¾ inches wide, ¼ inch thick	21.60	2.00
60	6 feet long, 1¾ inches wide, ¼ inch thick	34.56	3.20

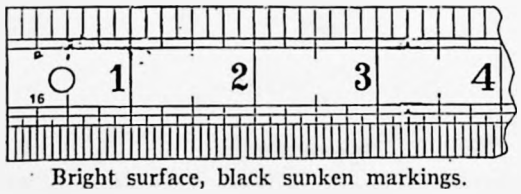
Nos.	Maple, Brass Bound	Each
200	2 feet long, 2 inches wide, ¼ inch thick	$2.40
300	3 feet long, 2 inches wide, ¼ inch thick	3.20
400	4 feet long, 2 inches wide, ¼ inch thick	4.00
500	5 feet long, 2 inches wide, ¼ inch thick	4.80
600	6 feet long, 2 inches wide, ¼ inch thick	6.00

Yard Sticks

Nos. 1, 2 and 11 graduated in 8ths on both sides. Nos. 7121, 7122 and 7422 graduated in 8ths on one side; other side fractions of yards.

Nos.		Per Dozen	Each
1	Maple, 1¼ inches wide, 8 inches thick, brass tipped	$6.48	$0.60
2	Maple, 1 inch wide, ⅜ inch thick, brass capped	6.48	.60
11	Maple, 1¾ inches wide, ¼ inch thick, brass tipped	10.80	1.00
7121	Maple, 1 inch wide, ¼ inch thick, plain	2.60	.24
7122	Maple, 1 inch wide, ¼ inch thick, brass tipped	3.80	.35
7422	Hickory, ⅞ inch wide, ⅛ inch thick, brass capped, round edges, flexible	5.40	.50

Steel Bench Rules



Bright surface, black sunken markings.

No. 62, 1¼ inches wide, No. 16 gauge, graduated both sides, upper edge in 8ths, lower edge in 16ths.

Length, feet	2	3	4	5	6
Per dozen	$17.60	$25.90	$32.95	$56.50	$70.55
Each	1.63	2.40	3.05	5.23	6.53

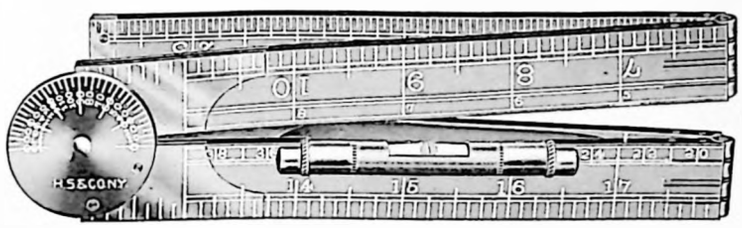
No. 60, ¾ inch wide, No. 20 gauge, graduated on lower edge only, 8ths on one side, 16ths on other.

	Per Dozen	Each
1 foot	$5.30	$0.49
2 foot	10.60	.98

Above prices are subject to change without notice

Rules

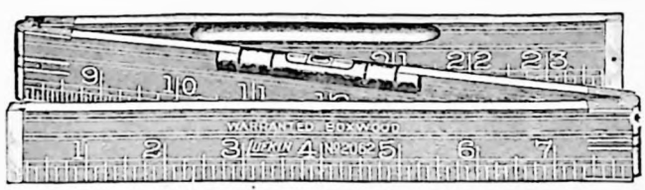
Lufkin
Combination



With Bevel and Level
Two-foot, Four-fold

Bevel is graduated to 5 degrees, but closer readings can be taken with the eye. 1½ inches wide when closed. Arch joints, extra heavy middle plates, bitted.
Graduated 8th, 16ths, and drafting scales.

No. 863L. Unbound, each $1.70
No. 873L. Half-bound, each 2.20



No. 2062 Made of highly finished boxwood, 2-foot, 3-fold, 1-inch wide, edge plates; graduated one side 8ths, other side 16ths. An entirely new and very useful tool for carpenters, plumbers, etc.

Each $1.18

Shrinkage Rules

Stanley
Boxwood—Pattern Makers

No. 30½

All castings shrink in cooling, depending on the kind of metal, the thickness, and the condition under which cast. For instance: the shrinkage per foot of castings where the thickness runs about 1 inch, cast under ordinary conditions, would average, in cast iron, ⅛ inch; in brass, 3/16 inch; in steel, ¼ inch; in tin, 1/12 inch, etc. Thicker castings under the same conditions will shrink less, and thinner ones more than this average.
To allow for shrinkage, patterns must be made larger than castings are wanted. Shrinkage rules are graduated to allow for shrinkage in different metals. The spacing of graduations are based for work on patterns, the figuring of graduations refer to castings.

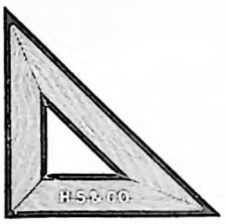
	1½ Inches Wide			
Numbers	30½C	30½E	30½F	30½G
Length, inches	24 2/10	24¼	24⅜	24½
Shrinkage, per foot, inch	1/10	⅛	3/16	¼

Graduated in 8ths, 10ths, 12ths and 16ths. Graduated 8ths and 16ths only, if so ordered.

Each $1.22

Triangles

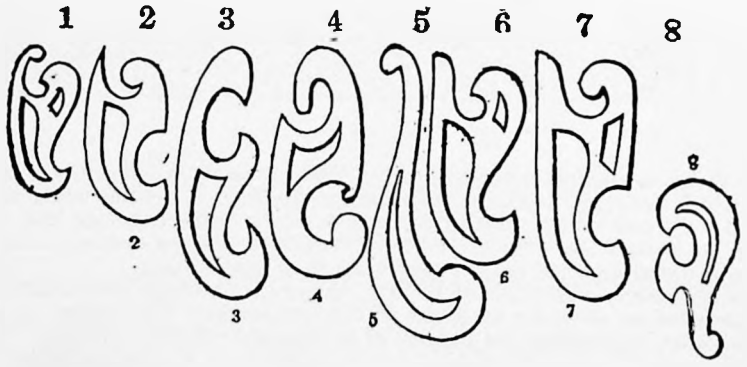
30 x 60 Degrees



45 x 45 Degrees

	30 x 60 Degrees				
Size, inches		7	9	11	13
No. 124	Cherry.				
	Per dozen	$2.05	$2.60	$3.17	
	Each	.20	.26	.32	
No. 132	Mahogany, ebony lined.				
	Per dozen	5.28	6.45	8.77	$11.65
	Each	.53	.64	.88	1.17
No. 145	Transparent amber or celluloid.				
	Per dozen	2.37	3.07	4.32	
	Each	.24	.30	.43	
	45 x 45 Degrees				
Inches		5	6	8	10
No. 125	Cherry.				
	Per dozen	$1.87	$2.05	$2.60	$3.27
	Each	.19	.20	.26	.33
No. 133	Mahogany, ebony lined.				
	Per dozen	4.67	5.28	6.48	8.77
	Each	.47	.53	.64	.88
No. 146	Transparent amber or celluloid.				
	Per dozen	2.37	2.70	3.96	4.60
	Each	.24	.27	.40	.48

Irregular Curves



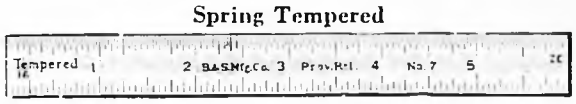
No. 174	Wood.	1	2	3	4	5	6	7	8
	Per dozen	$2.60	$3.05	$3.27	$3.27	$3.27	$3.05	$3.27	$2.60
	Each	.26	.30	.33	.33	.33	.30	.33	.26
No. 176	Transparent amber or celluloid.								
	Per dozen	3.24	4.32	4.86	4.86	4.86	4.86	4.86	3.24
	Each	.27	.36	.41	.41	.41	.41	.41	.27

Above prices are subject to change without notice

Steel Rules

Brown and Sharpe

Spring Tempered



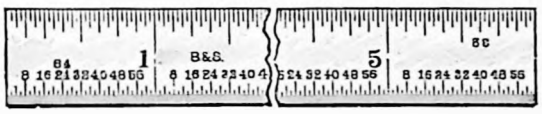
These rules are about 1/20 inch thick.

English Measure

No. 7 Graduation—16ths, 32nds, 64ths, 100ths.
No. 4 Graduation—⅛ths, 16ths, 32nds, 64ths.

No. 300

Length, Inches	Approximate Width, Inches	Number of Graduations	Each
2	½	7-4	$0.32
3	35/64	7-4	.40
4	19/32	7-4	.48
6	11/16	7-4	.64
9	53/64	7-4	.96
12	31/32	7-4	1.20
18	1	7-4	1.92
24	1	7-4	2.40



These rules are about 1/20 inch thick.

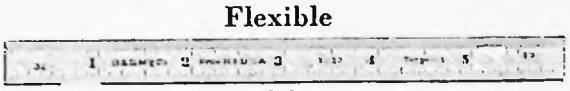
Figured Graduations—English Measure

This rule is figured as shown to assist the user in reading the 64ths.
Furnished in No. 4 Graduation only—8ths, 16ths, 32nds, 64ths.

No. 315

Length, Inches	Approximate Width, Inches	Each
1	29/64	$0.20
2	½	.32
3	35/64	.40
4	19/32	.48
6	11/16	.64
9	53/64	.96
12	31/32	1.20
18	1	1.92
24	1	2.40

Flexible



English Measure

Graduated one side only.
Very thin-spring tempered steel.
No. 10 Graduation—1st Corner 32nds. 2nd Corner 64ths.
No. 11 Graduation—64ths, 100ths.

No. 306

Length, Inches	Approximate Width, Inches	Number of Graduations	Each
4	½	10–11	$0.48
6	½	10–11	.64
9	½	10–11	.96
12	½	10–11	1.20

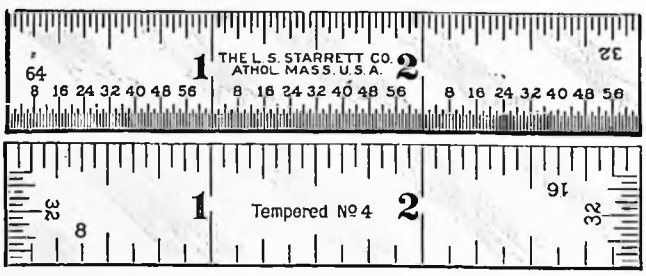
Steel Rules

Starrett Spring Tempered

English Measure

These rules are about $\frac{3}{64}$ inch thick.
No. 307 Graduated 16ths, 32nds, 64ths and 100ths.

Length, Inches	Width, Inches	Each
1	½	$0.24
2	½	.36
3	$\frac{9}{16}$	.48
4	⅝	.60
6	¾	.72
9	⅞	1.08
12	1	1.32
18	1⅛	2.04
24	1¼	2.60



English Measure

This rule is figured as shown to assist the user in reading the 64ths.
No. 603 Graduated 8ths, 16ths, 32nds and 64ths, with 32nds on ends of one side.

Length, Inches	Width, Inch	Each	Length, Inches	Width, Inches	Each
2	½	$0.36	9	⅞	$1.10
3	¼	.48	12	1	1.32
4	⅝	.60	18	1⅛	2.08
6	¾	.72	24	1¼	2.60

Flexible

English Measure

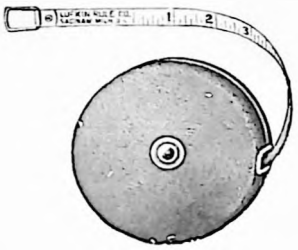
These are very thin spring-tempered rules, nicely graduated on one side only. Those from 1 inch to 12 inches are ½ inch wide, and will easily conform to a 2-inch circle. Those from 18 inches to 48 inches are ¾ inch wide, and are made from a trifle heavier stock.
No. 320 Graduated 32nds and 64ths.
No. 321 Graduated 64ths and 100ths.

Length, Inches	Each	Length, Inches	Each
1	$0.24	6	$0.72
2	.36	9	1.08
3	.48	12	1.32
4	.60		

Note.—Steel rules with Metric Graduation same price as English of same size.

Linen Tape Measures

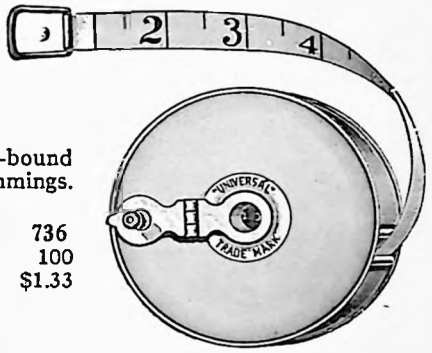
Lufkin



Pocket

With ¼-inch enameled linen tape. Nickel-plated brass case, spring wind, with center stop. Graduated in 8ths.

Numbers	173	175	176
Length, feet	3	5	6
Each	$0.47	$0.57	$0.68



Universal

With ½-inch extra grade corded linen tape, brass-bound case, enameled sides. Brass folding handles and trimmings. Graduated in 4ths.

Numbers	730	733	735	736
Length, feet	25	50	75	100
Each	$0.53	$0.85	$1.06	$1.33

Metallic

Keuffel & Esser

Dartmouth

A linen-woven tape 5/8 inch wide, bent leather case, long folding handle. All mountings nickel-plated. Leather reinforced end. Graduations begin at outside end of ring.

Numbers	7440T	7442T	7444T	7445T
Length, feet	25	50	75	100
Each	$2.50	$3.60	$4.45	$5.60

Lufkin

Made of best woven linen with metallic warp. 5/8-inch tape. Hard leather case, brass nickel-plated folding handle and trimmings. Graduated in ½s.

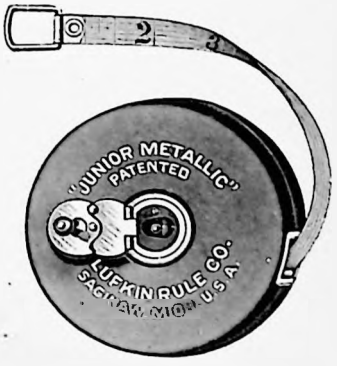
Numbers	500	503	505	506
Length, feet	25	50	75	100
Each	$2.20	$3.15	$3.95	$4.90

Junior Metallic

Lufkin

Same style, quality, etc., as above, with 3/8-inch tape. Graduated in 8ths. Vest-pocket size.

Numbers	660	663
Length, feet	25	50
Each	$2.30	$2.85



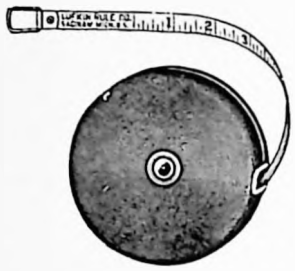
Piccolo

Keuffel & Esser

A woven tape 3/8 inch wide, leather case, long folding handle, all mountings nickel-plated. Graduations begin at outside of ring.

Numbers	7480T	7482T
Length, feet	25	30
Each	$2.30	$2.90

Steel Tape Measures



Pocket.

Lufkin

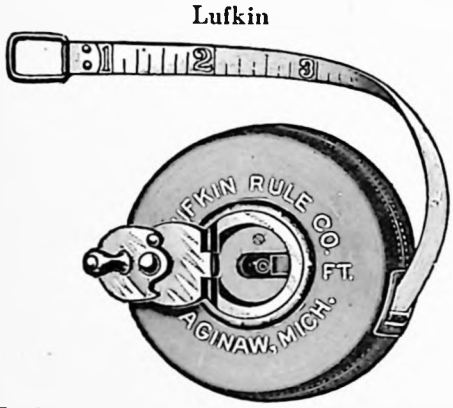
With ¼-inch Tape

Nickel-plated brass case, spring wind, with centre stop. Numbers with "M" are graduated in inches and 16ths on one side, millimeters on the other. Other numbers are graduated in inches and 16ths on one side only.

Numbers...	143	143M	145	145M	146	146M	148	148M
Length, feet	3	3	5	5	6	6	8	8
Each	$0.65	$0.69	$0.82	$0.90	$0.86	$1.08	$1.30	$1.50

Reliable

Lufkin



Hard leather case, steel lined; ⅜-inch steel tape; double-folding, flush handle; nickel-plated trimmings. Marked on front in feet and 12ths, inches and 8ths; on back in links and poles.

Numbers.	200	203	204	205	206
Feet	25	50	66	75	100
Each	$4.30	$6.90	$8.70	$10.00	$12.10

Cornell

Keuffel & Esser

Hard leather case, ⅜-inch steel tape; swiveling flush-folding handle. Nickel-plated trimmings. Graduations begin at *outside* end of ring.

Numbers..	7250T	7252T	7254T	7255T
Feet	25	50	75	100
Each	$4.55	$7.20	$10.50	$12.60

"Junior" Reliable

Same as Reliable, but with ¼-inch tape. Marked in feet, 12ths, 8ths and inches.

Numbers	100	103
Length, feet	25	50
Each	$3.85	$5.85

Home

Keuffel & Esser

Steel tape ⅜ inch wide; bent leather case; long folding self-opening handle. Nickel-plated trimmings. Graduations begin at *outside* end of ring.

Numbers	7350T	7352T	7354T	7355T
Feet	25	50	75	100
Each	$3.70	$4.55	$5.90	$7.70

Challenge

Lufkin

Hard leather case, steel lined; ⅜-inch steel tape; flush handle; nickel-plated trimmings. Marked one side only in feet and 12ths, 8ths and inches.

Numbers..	260	263	265	266
Feet	25	50	75	100
Each	$3.70	$4.55	$5.90	$7.70

"Junior" Challenge

Same as Challenge, but has ¼-inch tape. Marked in feet, 12ths, inches and 16ths.

Numbers	1260	1263
Length, feet	25	50
Each	$3.55	$4.30

Above prices are subject to change without notice

Plumbs and Levels

Stanley

Plain

Made from 1⅜ x 3½ Inch Stock

No. 00 Hardwood. Arch top plate, two side views, polished.

Length, inches	18	22
Each	$1.10	$1.15

Made from 1¼ x 2⅜ Inch Stock

No. 104 Hardwood. Arch top plate, two side views, polished.

Length, inches	12	14	16	18
Each	$0.85	$0.85	$0.85	$0.85

Adjustable

Made from 1⅜ x 3⅛ Inch Stock

No. 3 Hardwood. Arch top plate, two side views, polished. Brass tips.

Length, inches	24	30
Each	$2.10	$2.20

Duplex Adjustable

Three-ply Hardwood. 1⅜ x 3⅛ Inch Stock

Can be read conveniently, even if held at arm length above the head. Have three glasses: A level glass set in the top in the usual way, a plumb glass, and a second level glass set in the side. These latter two glasses are set close to one surface of the stock so that the angle of vision of the bubble is greatly increased. Brass lips and brass tips.
The second level glass can be readily reversed to form a second plumb if desired. All three glasses are adjustable.
The opening on the reverse side of the extra level and plumb glasses is brass trimmed.

Length, inches	24	30
No. 50 Each	$3.30	$3.45

Plumbs and Levels

Stanley
Iron

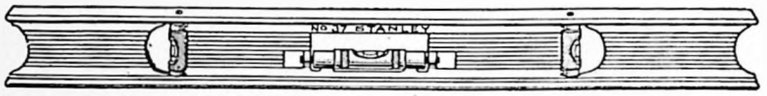


ILLUSTRATION Nos. 37G AND No. 237

No. 36G, Japanned, nickel-plated trimmings, with proved glasses. Two plumbs. Grooved bottom for working on shafting, piping, etc. Equally serviceable for ordinary use.

Length, inches	6	9	12	18	24
Each	$1.60	$1.90	$2.30	$2.75	$3.10

No. 37G, Nickel-plated, ground glasses, two plumbs. Grooved bottom for working on shafting, piping, etc. Equally serviceable for ordinary use. Glass can be covered when not in use by simply turning outer shell of level case.

Length, inches	12	18	24
Each	$3.10	$3.70	$4.30

Aluminum

On account of their light weight, great strength and the fact that they will not rust or warp, they are especially adapted for carpenters' use. Tops and bottoms are milled and ground to insure two perfectly parallel surfaces. They are fitted with proved glasses and both plumb and level glasses are protected by "Eclipse" covers. Made in three lengths. In ordering give length desired.

No. 237 Length, inches	12	18	24
Weight, pounds	1	1¼	1¾
Each	$3.20	$4.00	$4.65

Aluminum
Sand

ILLUSTRATION No. 24

Made of best aluminum. Are very light weight and durable. Will not rust or warp under any conditions. The Level Glasses are protected by heavy plate-glass for keeping out the dust, dirt and water.

	Each
No. 24 24 inches long, 2¾ inches wide	$6.25

Wood
Brass Bound Adjustable

Mahogany

The life of a wooden level is greatly increased by having the edges brass bound, which prevents the surface and edges from becoming damaged.

Brass bound levels have solid brass tips. The four edges are each protected by one piece of brass of special form, dovetailed the entire length into the wood and through the solid tips of solid brass or steel, heavily brass-plated to prevent rusting.

All brass lipped levels have brass plumb rings. Ground glasses, except No. 93, which has proved glasses. Made from especially selected, carefully polished and finished 1⅜ x 3⅛-inch stock. No. 98 levels have proportionately smaller cross sections. The No. 96 has 5-piece stock. Each level is packed in a pasteboard box.

Made in 24, 26 and 28-inch lengths. In ordering give the number and length required.

No. 93 Length, inches	24	26	28
Each	$3.45	$3.65	$3.80
No. 96 Five-ply brass lips, each	7.10	7.35	7.60

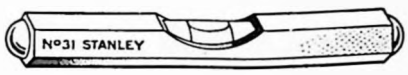
Rosewood, 1⅜ x 3⅛ inches. Brass lips and brass tips and ground glasses.

No. 98

No. 98 Length, inches	6	9	12	18
Each	$2.10	$2.60	$3.30	$4.25

Pocket Levels

Stanley



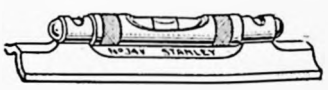
Hexagon

No. 31 Nickel-plated proved glass.

Length, inches	2½	3	3½
Each	$0.42	$0.50	$0.61

Square

		Each
No. 38½	Iron, nickel-plated, proved glasses, 4 inches long	$0.57
No. 39½	Iron, nickel-plated, proved glasses, 6 inches long	.70



Eclipse

No. 34G Nickel-plated, ground-glass. When not in use the glass can be covered by simply turning the outer shell of the case. 6 inches. Each..... $1.55
Has V-grooved bottom for leveling shafting, piping, etc. Equally serviceable for ordinary use.

Stevens

Line

Consists of an accurate proved level glass placed in a 3-inch aluminum tube with spring German silver end pieces and hooks formed from one piece of metal. The end pieces are attached to the tube by German silver rivets that pass through the tube and through lugs at top and bottom, between the hooks and the center of the level, thus preventing the hooks from pulling out of alignment in case of severe strain or rough usage.

Each $0.75

Plumb Bobs

H. S. & Co.

ILLUSTRATION
No. 50

No. 50 Long Neck, Brass Composition, with Screwed-in Steel Point.

Weight, ounces	4	8	12	16	24
Each	$1.00	$1.25	$1.70	$2.25	$3.40

ILLUSTRATION Nos. 5 AND 6

Cast Brass, Hardened Steel Point, Screw Top

		Per Dozen	Each
No. 5	6 ounces	$5.40	$0.50
No. 6	11½ ounces	7.56	.70

" Can't-Roll"

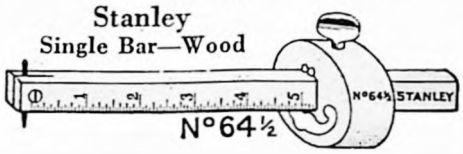
Made from Hexagon steel, nickel-plated and polished. Top is screwed on.

		Per Dozen	Each
No. 10	8 ounce	$5.72	$0.53
No. 20	12 ounce	5.72	.80

Above prices are subject to change without notice

Marking Gauges

Stanley
Single Bar—Wood

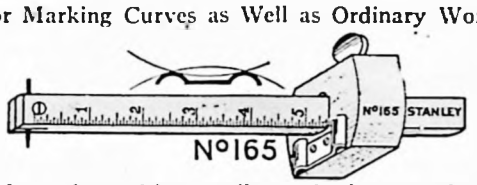


N°64½

Made of selected wood and highly polished. Bars in all numbers are oval in form and graduated in 16ths of an inch for 6 inches from the point. Gauges having a brass thumb screw have bar protected by a brass shoe. Face plates are brass, inserted in the head to prevent wear. The marking points (one each) are of tempered steel, and adjustable. They are securely locked by screws, but can be readily removed for sharpening.

		Per Dozen	Each
No. 65	Boxwood, brass screw, square head, face plates	$7.65	$0.71
No. 64½	Beech, brass screw, oval head, face plates	5.40	.50

With Circular Face Plates
(For Marking Curves as Well as Ordinary Work)



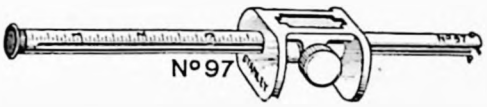
N°165

This device consists of a brass face with two ribs, and when attached to one side of a gauge head will enable the operator to run a gauge line with perfect steadiness and accuracy around curves of any degree, either concave or convex.

No. 165 Boxwood, brass screw, square head, brass-face plate and shoe.

Per dozen $8.10
Each ..... .75

Stanley
Steel



N°97

All these Gauges have steel bars, and the heads are machined castings. Two types of cutters are used—one a pin point, the other a roller cutter which can be used close into rabbets or corners.

All parts are finely finished, and the metal bars and heads are nickel-plated.

		Per Dozen	Each
Bars are 6½ inches long. Graduated in 16ths of an inch for 5 inches.			
No. 97	Metal head, pin point and roller cutter	$9.30	$0.86

Stearns
Steel

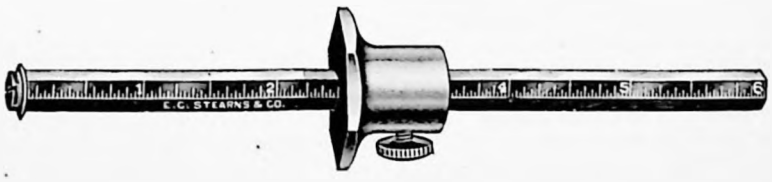


ILLUSTRATION No. 9

Single hexagonal beam, 6 inches long, gauges to 5¼ inches. Roller cutter.

	Per Dozen	Each
No. 9	$10.80	$1.00

Mortise Gauges

Double Bar

Mortise Gauges differ from Marking Gauges in that they require two independent Marking Points, but any of these Gauges may be used as a Marking Gauge.

Stanley

Steel

Bars are 6½ inches long, graduated in sixteenths of an inch for five inches.

No. 91 Metal Head, Pin Points.

Per dozen $10.80
Each 1.00

Stearns

Steel

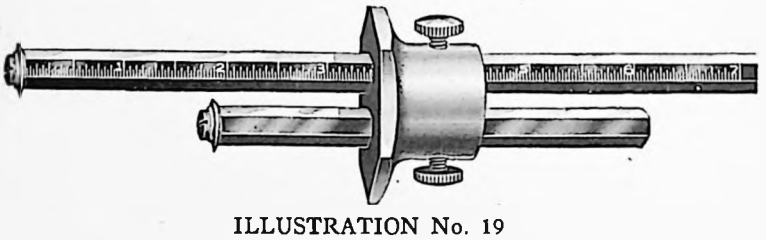


ILLUSTRATION No. 19

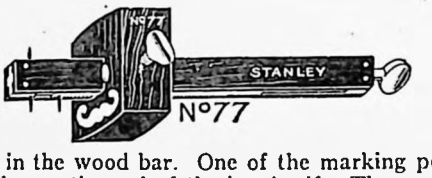
Highly finished in full nickel-plate. The heads are turned from the solid bar in automatic screw machines. The sharp, tempered steel marking roller is held by a set screw with very thin head, which admits marking up close in a rabbet or corner.

No. 19 With Roller Cutters and Double Hexagonal Beams—Long Beam, 8 inches, gauges to 7 inches. Short Beam, 4⅛ inches, gauges to 3¼ inches.

Per dozen $17.30
Each 1.60

Stanley

Slide Single Bar—Wood



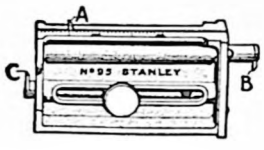
Have a brass slide working in the wood bar. One of the marking points or pins is affixed to one end of this slide, the other to the end of the bar itself. These points mark both sides of the mortise at the same time. The pins extend through the bar to allow a single point when the Gauge is used as a Marking Gauge.

Both bar and head made of selected wood and highly polished. The bar is oval in form and graduated in 16ths of an inch for 3 inches from point. Has face plate inserted in the head to prevent wear. Bar is protected by a brass shoe.

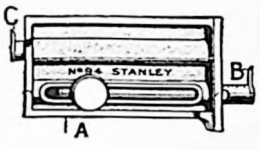
No. 77 Rosewood, Brass Slide, Screw Adjustment, Face Plates.

Per dozen $14.25
Each 1.32

Butt Gauges



Stanley



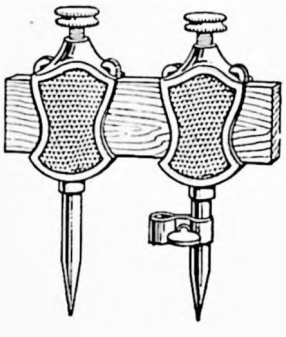
In hanging doors, there are three measurements to be marked—the location of butt on the casing, the location of butt on the door, and the thickness of butt on both casing and door. The term "Butt Gauge" covers a Gauge having three cutters, purposely arranged so that no change of setting is necessary when hanging several doors. In reality these tools comprise Rabbet Gauges, Marking Gauges and Mortise Gauges of a scope sufficient for all door trim, including lock plates, strike plates, etc.

In the illustrations the various cutters are marked by a letter which, in the several cuts, designates the cutter doing the same work. Cutter "A," which marks from the rabbet in the jamb, and cutter "B," which marks from the edge of the door engaged in closing, are mounted on the same bar and set by one adjustment with proper allowance for clearance; cutter "C" marks the thickness of the butt.

When casings have a nailed-on strike instead of being rabbeted, a Marking Gauge which will work on a ledge as narrow as ⅛ inch is required. In this case the same distance is marked from the edge of the casing and from the edge of the door not engaged when closing. Gauges 94 and 93 can be used on such work, cutter "B" marking for the butt and cutter "C" for its thickness. Gauges 94 and 95 are made so that they can be used as inside or outside squares for squaring the edge of the butt on either the door or jamb.

All Bars are locked by set screws and are graduated in sixteenths of an inch. Nos. 94 and 95 are graduated for 2 inches.

		Each
No. 95	Iron Body, Steel Bars, Nickel-plated.....	$1.20
No. 94	Iron Body, Steel Bars, Nickel-plated.....	1.30



Bronze Metal with Steel Points and Pencil Holder

Trammels

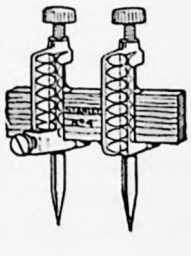
		Per Set
No. 1	For ¼ x ⅝ inch bars.....	$1.20
No. 2	For ⅜ x ⅞ inch bars.....	1.55

Stanley

These Trammel Points are so constructed that they can be attached to one side of any straight stick, without exact regard to its size, and are thus quickly adjusted for use.

The peculiar form of the socket makes it possible to use an ordinary-sized pencil, or a full-sized oval-shaped carpenter's pencil.

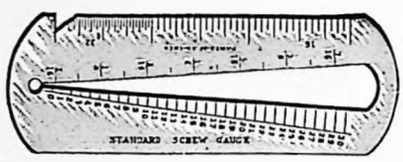
		Per Set
No. 4	Nickel-plated, with Steel Points.....	$0.87



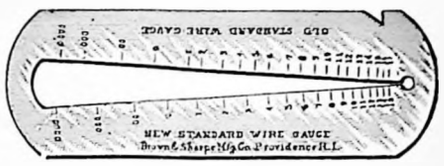
Gauges

Screw and Wire

Brown & Sharpe



FRONT VIEW



BACK VIEW

Graduated on front, on left of slot, to show American standard Screw Gauge from 0 to 30, and will measure wire as well as machine and wood screws.

A screw or wire is measured by passing it into the angular opening till it touches on both sides; the division at the point of contact indicates the number of the gauge stamped on the side of the slot.

In addition to the gauge numbers, the front is also graduated on the left of slot to 32nds of an inch.

The back is graduated as the old or English wire gauge, from 17 to 0000 on the right, and the new or American wire gauge from 15 to 0000 on the left of slot.

No. 700 Each $2.40

Screw Pitch or Nut

Brown & Sharpe

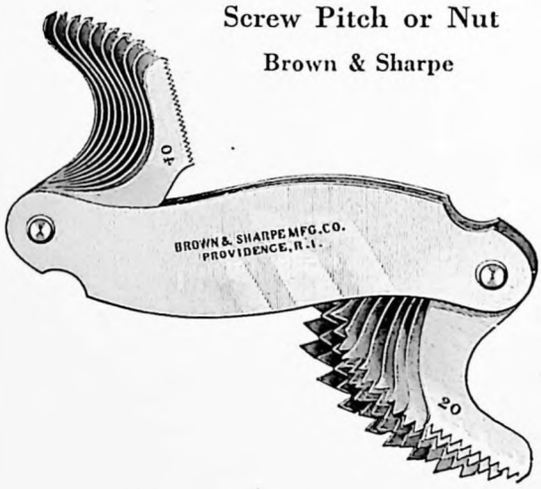


ILLUSTRATION No. 630

Designed for the threads of nuts as well as of screws, and contains the following threads per inch: 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18 and 20 on one end, and 22, 24, 26, 27, 28, 30, 32, 34, 36, 38 and 40 on the other.

The arrangement of blades, hinged on each end of the case, enables the mechanic to quickly select the desired blade and place it in position for use. The number of threads per inch and double the depth of the thread in decimals are stamped on each blade.

There are 22 pitches, including pipe thread; threads per inch, 11½ and 27. The 8-pitch can be determined by using the 16-pitch blade.

No. 630 Each..... $1.00

Gauges

Starrett

Tap and Drill

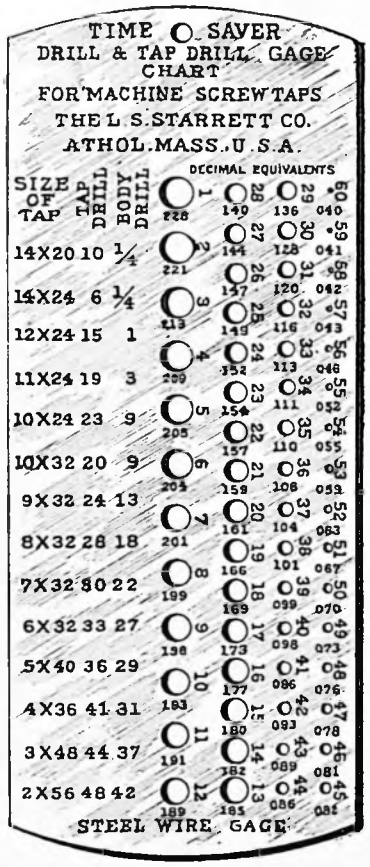


ILLUSTRATION No. 185

By the use of this Gauge one is enabled to select at once the right size drill to suit machine screw tap most commonly used, leaving just stock enough for the tap to cut as near a full thread as is practicable for one tap without breaking it, thus saving much time and uncertainty of result attending the former crude ways of making a selection.

Explaining the chart, the first row of figures, for an example, read thus, 14x20 10¼. The number 14 (in the first row of figures) means the number or size of tap; 20 the pitch or size of thread; 10 the size of drill to use which will leave the right stock for proper thread; and ¼, size of drill to use to let this tap or screw through outside of the thread.

The figures—1, etc., up to 60—designate the number of drill (size agreeing with the holes). Other figures, 228, 221, etc., designate the size of hole in thousandths of an inch.

No. 185 Each $1.92

Jobbers' Drill

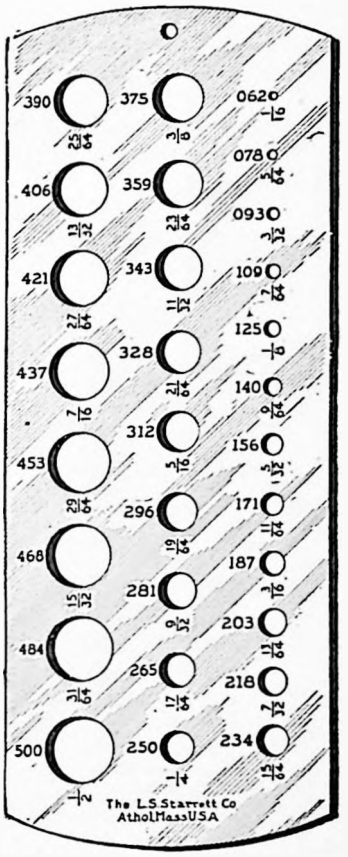


ILLUSTRATION No. 187

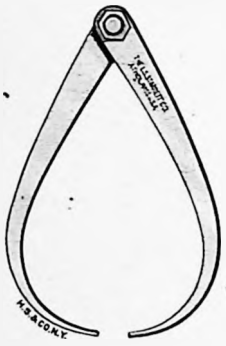
This gauge shows sizes from 1/32 inch to ½ inch, varying by 64ths, and is about 5/64 inch thick, 2 15/32 inches wide, 6¼ inches long. It is hardened, ground and rubbed to a bright finish. Thoroughly tested after hardening.

No.	Each
187	$2.20

Calipers and Dividers

Starrett Improved

Calipers with Firm Joint



Tempered

No. 26 Outside		No. 27 Inside	
Size, Inches	Each	Size, Inches	Each
3	$0.40	3	$0.40
4	.48	4	.48
5	.56	5	.56
6	.64	6	.64
8	.80	8	.80
10	.88	10	.88
12	.96	12	.96

Brown & Sharp

Tools Makers' Dividers with Solid Nut

ILLUSTRATION No. 800

Size, Inches	Each
2	$0.96
3	1.20
4	1.44
5	1.44
6	1.68

Dividers

Starrett Extension

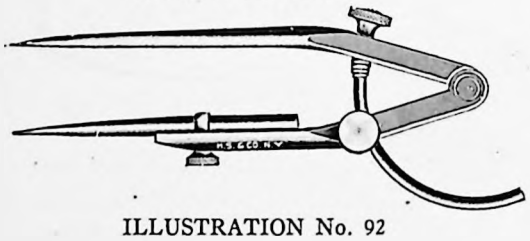


ILLUSTRATION No. 92

Both points are crucible forged steel, tempered. The quadrant passes through the leg and the clamp screw frictionally locks it firm. After fine adjustments are made, lock nut between the arms locks the spring, curing the defect in the old style dividers of the points dodging out and in with the grain of the wood. The adjustable point may be removed and pencil inserted in its place.

Inches	6	7	8	9
Plain, each	$1.08	$1.12	$1.20	$1.32

H. S. & Co. Winged

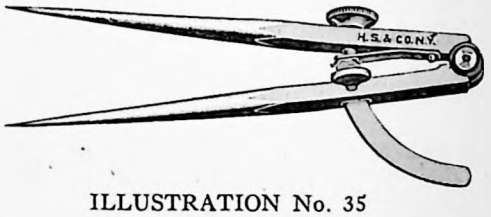


ILLUSTRATION No. 35

Forged steel, polished, with brass joints.

Inches	5	6	7	8
Per dozen	$5.40	$5.72	$6.48	$7.00
Each	.50	.53	.60	.65

Inches	9	10	12
Per dozen	$8.42	$9.50	$10.80
Each	.78	.88	1.00

Calipers

H. S. & Co. Winged

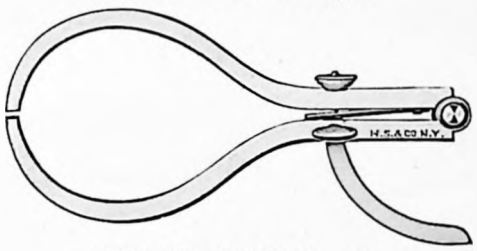
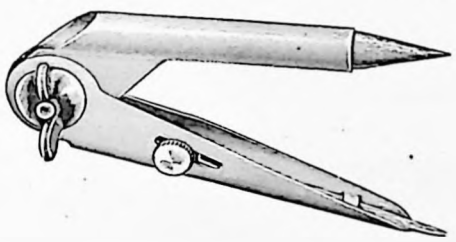


ILLUSTRATION No. 101

Polished Cast Steel with Set Screw

Size, inches	6	8
Per dozen	$8.10	$10.80
Each	.75	.95

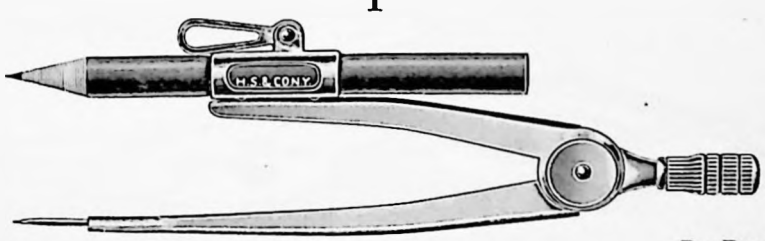
Improved Gem Scriber



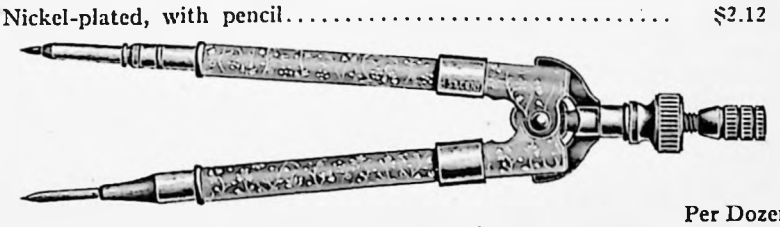
The sharp point may be pushed back, leaving broad, dull point for use in scribing from a small hole and for protection when carrying in pocket. Also prevents scratching plaster walls, fine woodwork, etc.

Per dozen	$2.70
Each	.25

Compasses



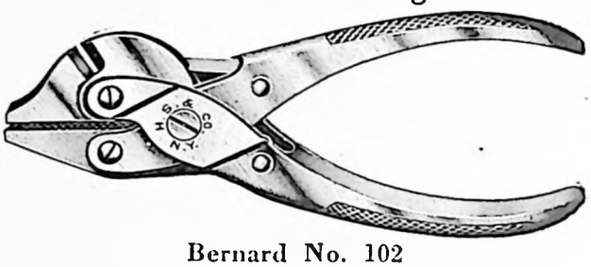
		Per Dozen	Each
No. 576	Nickel-plated, with pencil	$2.12	$0.20



		Per Dozen	Each
No. 569	Nickel-plated, with metal holder for lead and extra box of leads	$4.35	$0.40

Pliers

Side Cutting



Bernard No. 102

Warranted crucible steel, open throat, parallel jaws, full nickel-plated.

Inches	Per Dozen	Each
4½	$13.20	$1.22
5½	16.65	1.54
6	19.35	1.70
6½	20.10	1.86
7	23.00	2.13
8	28.85	2.67

Bernard No. 102½

Same design as No. 102, but will cut tempered steel wire.

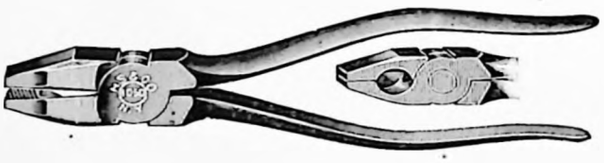
	Per Dozen	Each
5½-inch	$18.58	$1.72

Vulcan No. 502

Drop-forged steel, with compound lever, making it possible to cut heavy wire with slight pressure. Black handles, polished jaws.

8 inches ..... Each, $2.75

Lap Joint



H. S. & Co. Nos. 1050 and 1250

No. 1050, Black.

Inches	5	6	7	8
Per dozen	$8.65	$9.72	$10.48	$11.55
Each	.80	.90	.97	1.07

No. 1250, Nickel.

Inches	4	5	6
Per dozen	$10.80	$11.65	$12.42
Each	1.00	1.08	1.15

Gas and Burner

H. S. & Co. Nos. 118 and 326

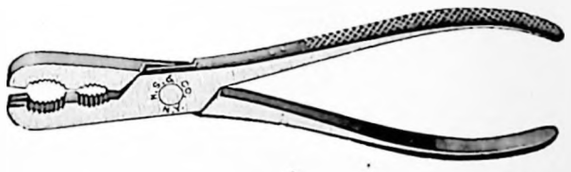
Cast steel, polished. No. 326 has knurled handle, extra fine quality.

No. 118

Inches	5	6
Per dozen	$5.35	$6.35
Each	.55	.65

No. 326

Per dozen	$6.90	$7.80
Each	.64	.72



H. S. & Co. No. 327 Burner

Cast steel, polished, knurled handle, extra fine quality.

	Per Dozen	Each
7-inch	$8.65	$0.80

H. S. & Co. Nos. 119 and 325 Gas

No. 119 Cast steel, polished.

No. 325 Cast steel, japanned handle, polished jaw, extra fine quality.

No. 119

Inches	7	8	9	10	12
Per dozen	$6.80	$7.55	$8.70	$9.40	$10.75
Each	.65	.70	.80	.90	1.00

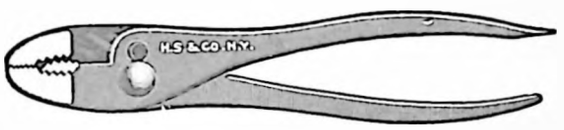
No. 325

Inches	8	9	10	12	14
Per dozen	$9.75	$11.45	$12.20	$14.60	$19.45
Each	.90	1.06	1.13	1.35	1.80

Above prices are subject to change without notice

Pliers

Combination



Billings & Spencer

Drop-forged from tool steel. Finely finished. A powerful wire cutter is located near the bolt. An ⅛-inch wire may be cut with ease.

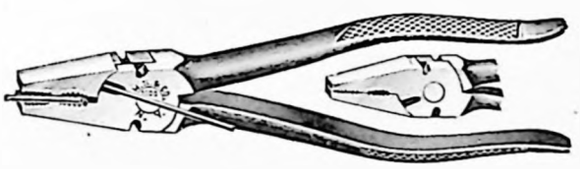
Inches	6	8	10
Black, No.	1	2	3
Per dozen	$9.83	$11.55	$12.83
Each	1.00	1.18	1.31
Nickel, No.		0N	1N
Per dozen		$8.55	$10.70
Each		.88	1.10

H. S. & Co. No. 305

A high grade tool in quality and finish. Forged from fine steel. Knurled handles.

	Per Dozen	Each
7-inch Nickel	$12.53	$1.16

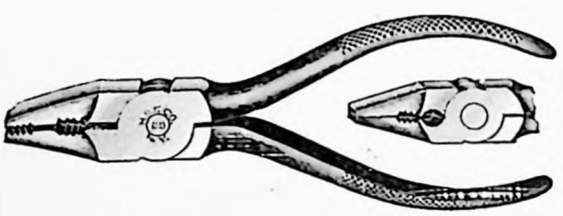
Button



H. S. & Co. No. 1000

Drop-forged steel, with four wire cutters. The two cutters between the jaws are so designed that the wire is held after it is cut. Blue checkered double roll handles.

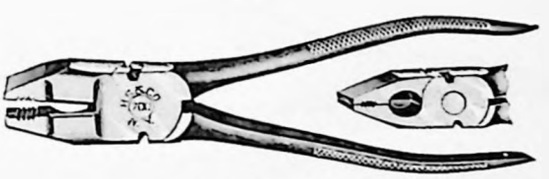
Inches	6	8
Per dozen	$7.35	$8.85
Each	.68	.82



H. S. & Co. No. 25

Drop-forged steel, blue handles. Combines a burner, flat nose and side-cutting pliers.

	Per Dozen	Each
5-inch	$9.72	$0.90
5½-inch	11.35	1.05



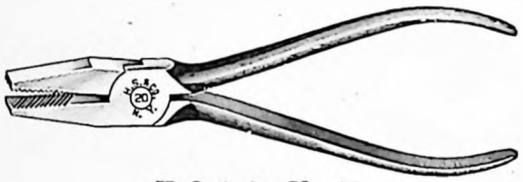
H. S. & Co. No. 700

Drop-forged steel, with blue checkered handles.. Burner teeth are milled. Combines a wire cutter, side cutter, flat nose and gas pliers, and screwdriver.

	Per Dozen	Each
7-inch	$12.95	$1.20

Pliers

Flat Nose

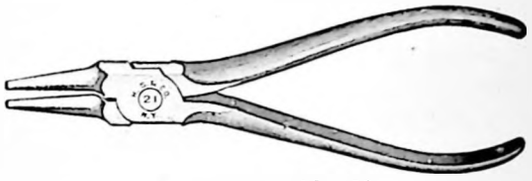


H. S. & Co. No. 20

Drop-forged steel.

Size, inches	4	4½	5	5½	6
Per dozen	$7.00	$7.25	$7.55	$8.10	$8.65
Each	.65	.67	.70	.75	.80

Round Nose

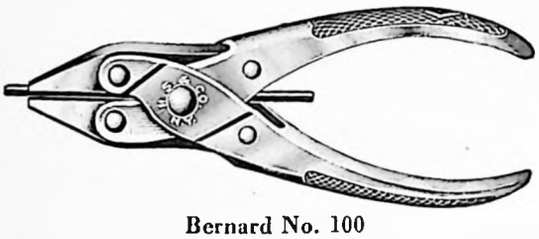


H. S. & Co. No. 21

Drop-forged steel. Lap joint. Blued.

Size, inches	4	4½	5
Per dozen	$6.90	$7.25	$7.55
Each	.64	.67	.70

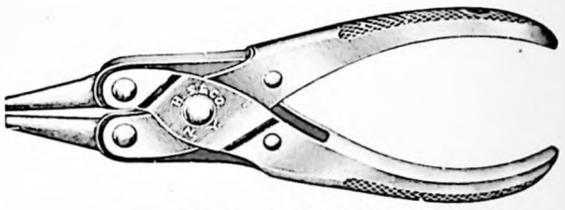
Size, inches	5½	6
Per dozen	$8.10	$8.55
Each	.75	.80



Bernard No. 100

Warranted crucible steel. Open throat, parallel jaws. Full nickel-plated.

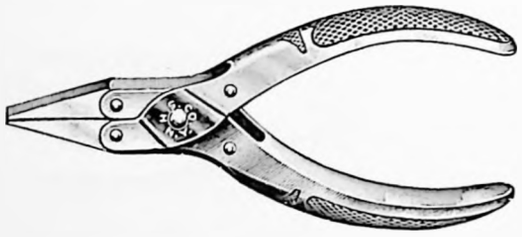
Size, inches	4½	5	5½	6½
Per dozen	$6.90	$8.10	$9.18	$11.56
Each	.64	.75	.55	1.07



Bernard No. 101

Warranted crucible steel. Open throat, parallel jaws. Full nickel-plated.

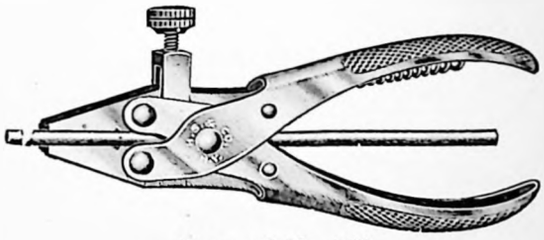
Size, inches	4½	5	5½	6½
Per dozen	$6.90	$8.10	$9.18	$11.56
Each	.64	.75	.55	1.07



Bernard No. 103

Same as No. 100, but lighter construction.

Size, inches	4	4½	5
Per dozen	$7.00	$7.67	$9.10
Each	.65	.71	.84

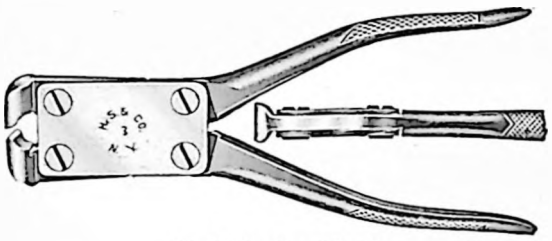


Bernard No. 113

Open throat, parallel jaws. Full nickel-plated. Warranted crucible steel. Can be used as a Plier Wrench and Hand Vise. Provided with a spring in the handle, which will throw and maintain them open.

Size, inches	6½
Per dozen	$15.10
Each	1.40

End Cutting Nippers

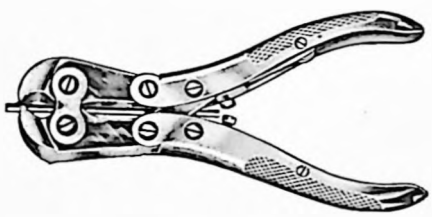


H. S. & Co. No. 3

Blue Checkered Handle

Inches	4½	5½	7½	9
Per dozen	$16.48	$17.60	$20.00	$25.60
Each	1.52	1.63	1.85	2.37

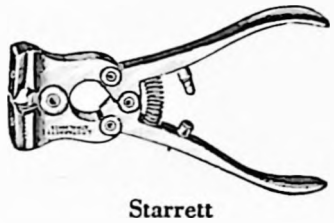
No. 3M for music wire will be furnished if desired, at regular prices.



Bernard No. 125

Open throat. Full nickel-plated. Spring in handle. Not for music wire.

Inches	4	5	6	7
Cuts wire, inches	1/10	3/32	1/8	5/32
Each	$1.45	$1.80	$2.15	$2.50



Starrett

Head and handles drop-forged steel, finely finished. All parts case-hardened, except the jaws, which are properly tempered for their work. Jaws are detachable and can be ground and replaced. No. 1M will cut music wire up to No. 25.

Inches	5½	7
No. 1 Regular, each	$3.15	$4.05
No. 1M For Music Wire, each	3.15	4.05
Extra Jaws, per pair	.55	.55
Extra Screws, per dozen	.25	.25
Each	.05	.05
Extra Springs, per dozen	.50	.50
Each	.05	.05

Bernard No. 135

Will cut music wire up to No. 32. Open throat. Full nickel-plated, spring in handle.

5-inch, each.....$2.00

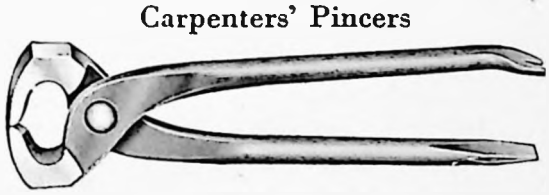
Compound End Cutting Nippers

Carew

Forged steel. Interchangeable jaws.

Inches	8	10	12	14
Each	$3.10	$3.35	$3.95	$4.80
Jaws, per pair	.92	.96	1.05	1.08

Carpenters' Pincers



No. 475

No. 475 Cast steel. Polished jaws.

Inches	6	8	10
Per dozen	$5.18	$7.15	$9.05
Each	.48	.66	.84

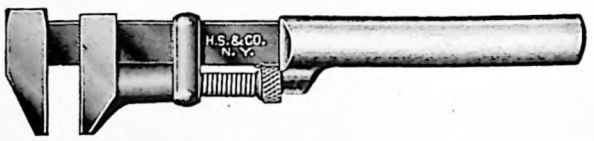
Wrenches

Genuine Coes Knife Handle

Cast semi-steel frame handle, hardwood sides secured at both ends by insertion under metal and riveted up under pressure. The screw is of hardened steel and in one piece.

Length, inches	6	8	10	12	15	18	21
Open, inches	1	1¼	1¾	2¼	2⅝	3	4
Per dozen	$8.10	$9.70	$11.90	$15.10	$20.50	$25.90	$31.30
Each	.75	.95	1.15	1.45	1.95	2.45	2.95

Genuine Coes Steel Handle



Strongest wrench made, the bar is fully hardened and cold swaged, jaws are semi-steel and hardened, screw is steel hardened and of one piece, handle is semi-steel casting internally supported and retained by cross riveting and by extension of bar through handle and riveting same.

Length, inches	6	8	10	12	15	18	21
Open, inches	1	1¼	1¾	2¼	2⅝	3	4
Per dozen	$8.10	$9.70	$11.90	$15.10	$20.50	$25.90	$31.30
Each	.75	.95	1.15	1.45	1.95	2.45	2.95

Genuine Stillson

Wood Handle, 6 to 14 Inches

Steel Handle, 8 to 48 Inches

Length Open, Inches	Takes Pipe, Inches	Each	Auto. Each	Extra Jaws Each	Extra Nuts Each	Extra Frames Each	Wood Handles Each
6	⅛ to ½	$0.85	$0.85	$0.32	$0.05	$0.16	$0.06
8	⅛ to ¾	.97	.97	.34	.07	.18	.07
10	⅛ to 1	1.07	1.07	.37	.09	.22	.08
14	¼ to 1½	1.50	....	.50	.13	.26	.12
18	¼ to 2	2.15	....	.75	.15	.32	....
24	¼ to 2½	3.10	....	.97	.24	.40	....
36	¼ to 3½	5.78	....	1.85	.48	.73	....
48	1 to 5	8.55	....	3.20	.65	.94	....

Above prices are subject to change without notice

Adjustable Wrenches

Diamond

Drop forged from one piece highest grade tool steel, correctly hardened, like a cold chisel—not case hardened—insuring a light, tough, strong and most dependable wrench. Guaranteed in every way.

Length, inches	6	8	10
Capacity, inches	¾	15/16	1⅛
Weight, pounds	7/16	⅝	1⅛
Per dozen	$6.50	$8.10	$10.25
Each	.60	.75	.95

Billings and Spencer

Heavy Duty Model No. 1

The Practical Design and Superior Features of this wrench will be readily recognized, as experience has shown that the end wrench is the most serviceable known. Made of drop-forged steel throughout.

Nos.	Length, Inches	Capacity, Inches	Each
1	6	13/16	$1.00
2	8	1 7/16	1.20
3	10	1 5/16	1.75

Automobile Wrenches

Billings and Spencer

Drop-forged from bar steel and case hardened

Semi-Finish

Nos.	1	2	3	5
Length, inches	6	8	10	15
Opens, inches	1 1/16	1½	2 7/16	2 13/16
Thickness of Jaw, inches	5/16	⅜	7/16	9/16
Depth of Jaw, inches	1	1¼	1½	1¾
Weight, pounds	⅝	1	1¾	4
Each	$0.65	$0.85	$1.08	$1.70

Wrenches

Alligator

Victor Adjustable

Drop-forged from best tool steel, 7 inches long; holds pipe up to ¾ inch and rods and nuts up to 1 inch.

	Each
No. 365 Full Nickel-plated	$1.38

Solid Steel

ILLUSTRATION No. 1

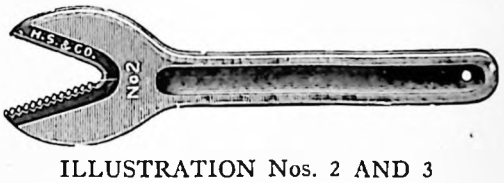


ILLUSTRATION Nos. 2 AND 3

Forged solid in one piece, from best refined iron, with tempered steel jaws. No. 1 Pocket and Pony are plate steel. They all have ratchet teeth cut diagonally across one jaw, thus enabling them to bite with three teeth at once. A single wrench will hold many sizes of nuts or bolts without the necessity for adjustment.

Nos.	1	2	3
Holds Pipe, inches	⅛ to ⅜	⅜ to ¾	½ to 1¼
Holds Round Iron, inches	¼ to ¾	½ to 1	¾ to 1⅜
Length, inches	5⅝	8⅞	15¾
Per dozen	$1.40	$4.97	$9.50
Each	.13	.46	.88

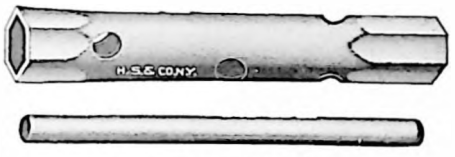
Always Ready

Nos.	Length overall, inches	Holds sq. or rd. iron, diam., inches	Per doz.	Each
1	5	¼ to ¾	$3.35	$0.31
2	7	¼ to 1¼	4.54	.42
2½	9½	¼ to 1¾	7.24	.67
3	11½	¾ to 2	10.80	1.00

 Above prices are subject to change without notice

Socket Wrenches

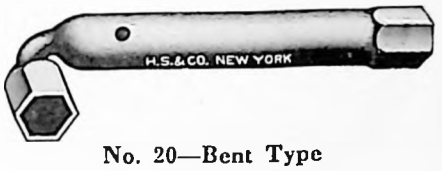
Straight



No. 10—Straight Type

Size	Fits United States Standard Hexagon Nuts, Inch	Fits United States Standard Hexagon Cap Screws, Inch	Each
1	1/4	1/4	$0.34
2	5/16	3/8 — 7/16	.38
3	3/8	1/2	.44
4	7/16 — 1/2	9/16 — 5/8	.51
5	9/16 — 5/8	3/4	.60

Bent



No. 20—Bent Type

Size	Fits United States Standard Hexagon Nuts, Inch	Fits United States Standard Cap Screws, Inch	Each
6	..	1/4	$0.40
7	1/4	5/16	.48
8	..	3/8	.53
9	5/16	7/16	.56
10	3/8	..	.60
11	..	1/2	.63
12	7/16	9/16	.63
13	1/2	5/8	.80

For Brace

STEEL TUBE

Blued. Cut Shows Hexagon

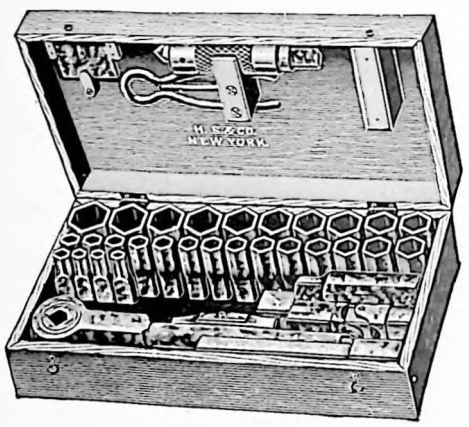
When ordering, state whether wanted for Square or Hexagon Nuts.

Size of Nut for Bolt, inch	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4
Square opening, inches	7/16	9/16	5/8	3/4	7/8	1	1 1/16	1 3/16
Hexagon opening, inches	1/2	5/8		13/16	7/8	1	1 1/16	1 1/4
Each	$0.32	$0.34	$0.37	$0.39	$0.43	$0.47	$0.56	$0.65

Socket Wrenches

Starrett

In Sets



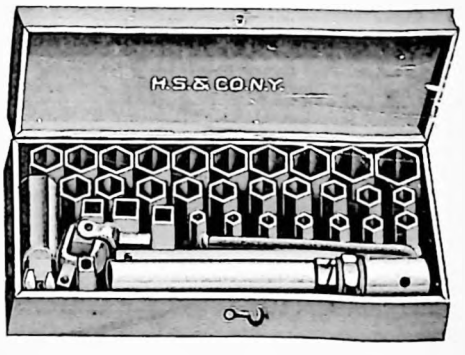
This wrench is made from drop-forged steel, case hardened and strong where strength is required, yet light and convenient to handle. The ratchet can be instantly reversed by simply rotating between thumb and finger the stem end of the dog in the end of the handle half a turn. Hexagon drawn steel sockets varying by 32nds from 5/16 to 1¼ inches, have duplicate shanks to fit the square opening through the ratchet head, also the end of a square extension piece which fits the ratchet where they are frictionally held, and will reach otherwise inaccessible places. A universal joint is also made to fit this extension piece to turn a nut otherwise difficult to get at. A screwdriver with reversible blades of two sizes also fits the extension and may be used with or without the wrench.
A first-class drilling fixture is made to fit the ratchet head, which will hold any size of twist drill from 1/8 inch to ¼ inch, with which drilling can be done in difficult places to best advantage, the feed being done with our special friction wrench sent with each.
This Wrench, with a full set of sockets and other accessories, will be found of inestimable value to engineers and machinists in every plant where nuts and bolts are used, as well as to the automobilist.

	Each
No. 443A, complete	$16.00
No. 443B, without Drill Fixtures	13.60

Sent complete unless otherwise ordered.

Auto Cle

The Large Auto Cle Set consists of the following:
One take-down reversible ratchet handle, nickel-plated.
One swivel or Universal joint, which permits using the wrench at any angle.
One 9½-inch extension bar.
One 1¾-inch extension bar.
Two sizes of screwdriver bits.
Thirty-one sizes of Mottled Case-hardened Pressed Steel Sockets.
Sizes of sockets furnished:



Hexagon

5/16, 11/32, 3/8, 13/32, 7/16, 15/32, 1/2, 17/32, 9/16, 19/32, 5/8, 21/32, 11/16, 23/32, 3/4, 25/32, 13/16, 27/32, 7/8, 29/32, 15/16, 31/32, 1, 1 1/32, 1 1/16, 1 1/32, 1 1/8 inches.
Special Spark Plug Socket, 13/16 inch hexagon, 4 inches long.

Square

13/32, 17/32, 21/32 inch.

These sockets will fit all set screws, bolts and nuts in general use on automobiles, whether of American or foreign manufacture.

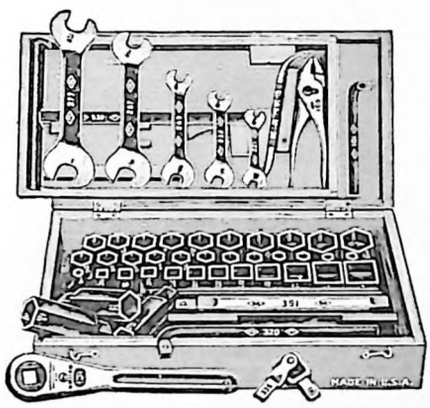
The above parts and sockets are contained in a compact hardwood case fitted with pegs on which to place the sockets, thus making loss of parts unlikely and preventing rattle or noise.

	Per Set
In Wooden Case	$8.90

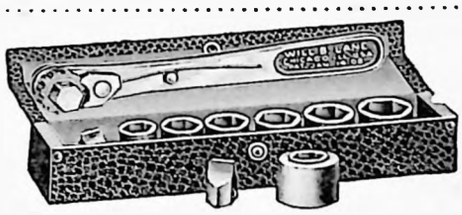
Socket Wrenches

Mossberg

In Sets



A full socket wrench set, each tool a unit of usefulness and guaranteed as to quality and service. The tray inside the cover contains tools in greatest demand daily—a decided convenience. Wooden box contains:
One Nickel-plated Ratchet Socket Wrench, 10 inches long, No. 350.
One Steel "T" Handle Wrench, hardened and finished in Rustproof Black, 10 inches long, No. 330.
One Steel Offset Socket Wrench Handle, hardened and finished in black, 10 inches long, No. 320.
One Steel Extension Bar, hardened and finished in black, 9½ inches long, No. 351.
One Pair Slip Joint Combination Pliers, polished jaws, black finish, 6 inches long.
Five Full-finished, Double-end Wrenches, having openings: 5/16 and 3/8; 7/16 and ½; 9/16 and 5/8; ¾ and 7/8; 15/16 and 1 inch.
Three Special Spark Plug Sockets, sizes: 13/16 inch, 7/8 inch, and 1 3/32 inches.
One Double-end Offset Screwdriver, No. 101.
One Cotter Pin Extractor, mottled finish, No. 3.
One Universal Joint, used with Steel Extension Bar or 3/8 inch Square Socket.
Twenty-three Hexagon Sockets, properly hardened, rustproof finish, with openings:
5/16, 3/8, 25/64, 7/16, 29/64, ½, 33/64, 17/32, 37/64, 9/16, 19/32, 39/64, 5/8, 41/64, 21/32, 43/64, 11/16, 45/64, 23/32, 47/64, ¾, 49/64, 25/32, 51/64, 13/16, 53/64, 27/32, 55/64, 7/8, 57/64, 29/32, 59/64, 15/16, 61/64, 31/32, 63/64, 1, 1 1/32, 1 1/16, 1 3/32, 1 1/8, 1 5/32, 1 3/16 inches
Eleven Square Sockets, properly hardened, rustproof finish, with openings:
13/64, 7/32, 15/64, 17/64, 9/32, 19/64, 5/16, 21/64, 11/32, 23/64, 3/8 inches
No. 14 Per set $10.65

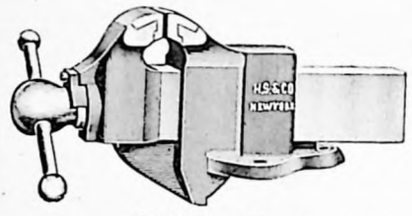


Lane Standard

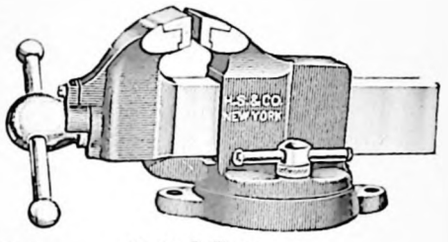
All machined parts from high-grade steel and case-hardened; handles are drop-forged. Packed in a neat leatherette case as follows:
One 7-inch handle. Two screwdriver bits.
Seven semi-finished sockets to fit following hexagon nuts.
United States Standard Nuts from ¼ to ½ inch.
A. L. A. M. Standard Nuts from 5/16 to 11/16 inch.
Cap Screw Heads from 5/16 to 5/8 inch, inclusive.
Per set $3.20

Vises

Parker



Stationary Base



Swivel Base

Reinforced Slide
Semi-Steel Solid Jaw

The very strong low Jaws are a distinctive feature of this line and have given them the name of Never Break.

Stationary Base

Nos.	29X	39X	49X	59X
Jaws, inches	3¼	3¾	4¼	4¾
Open, inches	4	6¼	7	8
Weight, pounds	31	47	66	81
Each	$7.70	$8.70	$11.35	$14.70

Swivel Base

Nos.	229X	239X	249X	259X
Jaws, inches	3¼	3¾	4¼	4¾
Open, inches	4	6¼	7	8
Weight, pounds	36	54	75	95
Each	$10.00	$11.35	$14.00	$18.35

Eclipse

Similar to line above, somewhat lighter in construction and made of high-grade gray iron castings, instead of semi-steel; unequaled at the price.

Stationary Base

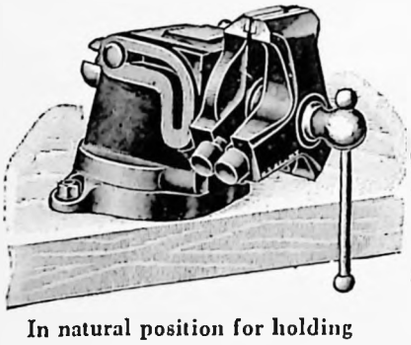
Nos.	102	103	104	105	106	107
Jaws, inches	3	3½	4	4½	5	6
Open, inches	4	5	6	6½	7½	10
Weight, pounds	23	35	43	61	82	133
Each	$6.70	$7.50	$8.50	$10.35	$13.35	$26.00

Patent Swivel Base

Nos.	202	203	204	205	206	207
Jaws, inches	3	3½	4	4½	5	6
Open, inches	4	5	6	6½	7½	10
Weight, pounds	27	42	58	76	104	158
Each	$8.70	$10.00	$11.35	$13.35	$20.00	$34.70

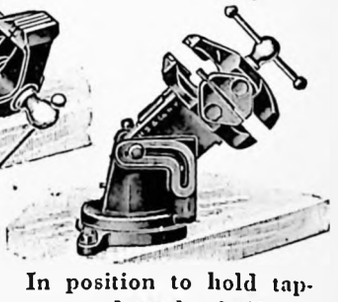
Emmert Universal

This Vise is so constructed as to be used in any conceivable position, and readily conforms itself to hold irregular-shaped pieces. It is supplied with five pairs of holding jaws; one pair for filing and fitting; one for round or finish work; one for rings, segments, hollow parts or irregular shapes; one for tapers, round or square, and for smaller metal rods, one for holding cylinders, etc. Three of these jaws are shaped on the vise head, any pair of which may be brought into service singly or together in pairs.



In natural position for holding rough castings

At angle one of the most convenient positions for the toolmaker and impossible to obtain in any other vise on the market.



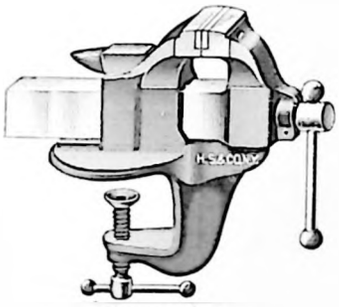
In position to hold tapered work of all descriptions

No.	Size of Jaws, Inches	Opens, Inches	Weight, Pounds	Each
6A	3	5	55	$25.65

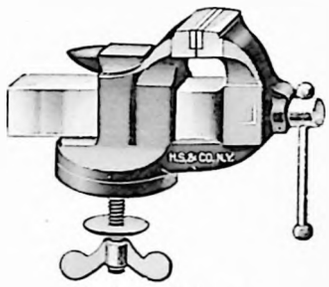
Above prices are subject to change without notice

Vises

Jersey



Clamp Base



Swivel Base

"Jersey" Vises are made especially for light work and makers of small tools. They are strong and substantial. Only the best materials are employed in their construction, great care being taken to see that all parts fit accurately.

The Screw (body, head and collar) is turned from one piece of cold rolled steel and has a square, lathe-cut thread. The jaws are ground to insure that they meet squarely when tightened. Both back and front jaws are filed to a fit.

The Clamp Base permits the Vise to be clamped to benches of varying thicknesses up to 2 inches, and the Swivel Base is permanently screwed to the bench, but allows the Vise to be turned to the right or left as desired, and firmly locked by means of a clamping nut.

Clamp Base, Plain Iron Jaws

No.	Jaws, Inches	Weight, Lbs.	Each
741	1½	3	$1.22

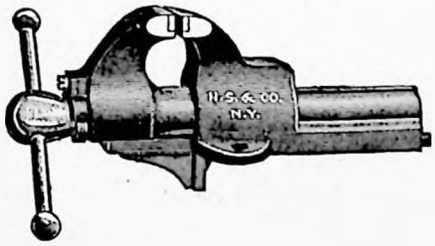
Clamp Base, Hardened Tool Steel Jaws

Nos.	Jaws, Inches	Weight, Lbs.	Each
761	1½	3	$1.55
762	1¾	3¼	1.75
763	2	3½	2.05
765	2½	5	2.80
766	3	8¾	4.15

Swivel Base, Hardened Tool Steel Jaws

No.	Jaws, Inches	Weight, Lbs.	Each
773	2	3½	$2.10

Parker Oval Slide



Hard Steel Inserted Jaw Faces

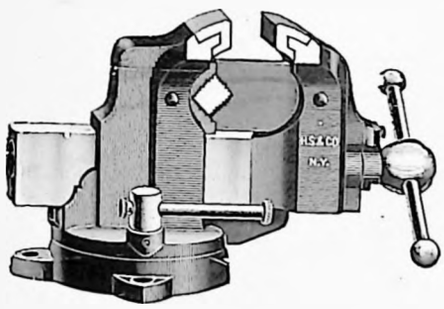
An Excellent Vise at a Better Price

Nos.	Jaws, Inches	Opens, Inches	Weight, Lbs.	Each
30	2⅝	3¾	8½	$2.65
31	3	4	13	3.05

Combination Pipe Vises

Parker Reinforced Slide

The strongest and most durable vise made. Has removable and renewable jaw faces made of best tool steel, milled and fitted to jaws. A solid steel strengthening bar, inserted the entire length of slide, renders same practically unbreakable. Solid under portion on front jaw and one-piece collar and vise screw are added features.



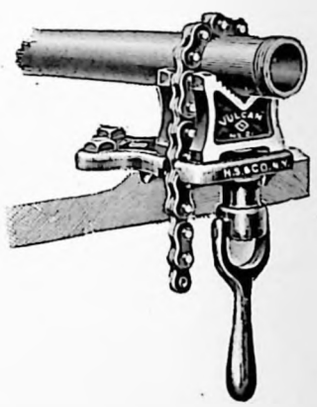
Swivel Base

No.	Weight, Lbs.	Jaw, Inches	Opens, Inches	Holds Pipe, Inches	Each
87	41	3⅝	4¾	2	$12.00

Chain Pipe Vises

Vulcan

Drop-forged Steel. For Holding Pipe, Bolts, Bars, Shafts, etc.

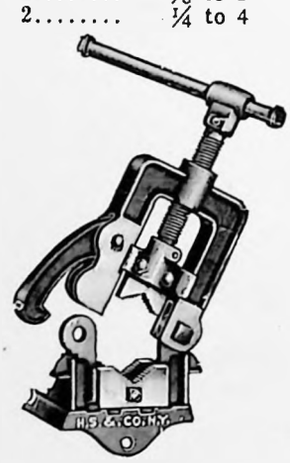


This Vise is unbreakable, compact, rapid in action and positive in gripping pipe. It especially replaces the bulky, heavier tools commonly used for service away from workshop.

Adjustment is quickly effected by slightly turning the screw, and further quick adjustment is gained by engaging the projecting rivets of chain with a series of bosses on base.

It is made entirely of wrought steel. The drop-forged jaws are of saw-temper for file sharpening. The hand-made chains are of unexcelled quality. All parts are fully guaranteed and interchangeable.

Nos.	For Pipe, Inches	Size Folded, Inches	Weight Lbs.	Each
1.....	⅛ to 2	4 x 5 x 6	4	$2.98
2.....	¼ to 4	6 x 8 x 8	10	6.38



Hinged Pipe Vises

Armstrong

Made of best malleable iron, with steel jaws; all parts interchangeable.

Nos.	Holds Pipe, Inches	Weight, Lbs.	Each
Junior	⅛ to 1¼	3	$1.67
0	⅛ to 2½	11	3.35
1	⅛ to 2½	16	4.00
2	½ to 4½	30	8.35

Above prices are subject to change without notice

Vises

Yankee

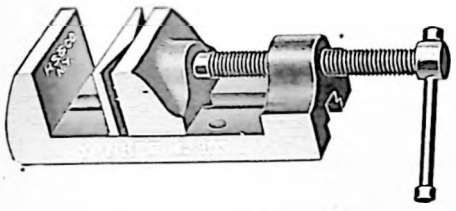


ILLUSTRATION No. 990

The body and sliding jaw are of cast iron, accurately machined to hold work square when used either flat or on sides. The sliding jaw has a T-shaped block screwed to its under side, sliding in a T-shaped slot $\frac{5}{16}$ inch wide, insuring parallel movement of jaw.

A removable swivel jaw is provided to hold taper work, and is made of steel, case hardened. The stem has a friction spring to hold jaw in position. The adjusting screw is of steel $\frac{1}{2}$ inch diameter with $\frac{1}{4}$ inch head to receive sliding bar. The boss on end of body in which screw works is $\frac{7}{8}$ inch long. Two countersink holes are provided in base to screw vise to bench if desired.

The base of vise is 6 inches long and $2\frac{3}{8}$ inches wide. Extreme height, 2 inches. The opening of jaws, without swivel jaw, is 3 inches, with swivel jaw, $2\frac{5}{8}$ inches. Depth of jaws, $1\frac{3}{4}$ inches. Weight of vise, $3\frac{1}{4}$ pounds.

Each $2.55

Weight each, 4 pounds; one in a box.

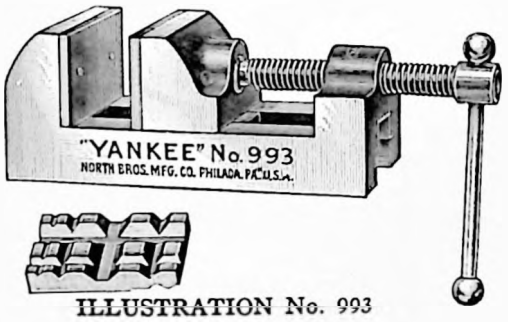


ILLUSTRATION No. 993

This is similar in design to the "YANKEE" Vise No. 990, but of larger capacity, and for ues in holding work to be machined. It can be used not oniy on base, but on either side or even on end.

The body and sliding jaw are of cast iron, with hardened steel faces. The sliding jaw extends through slot one inch wide in body of Vise in one piece, fitted with two steel keys set in the same, thus securing a parallel movement, and so constructed as to cause very little wear.

The screw is of steel $\frac{5}{8}$ inch diameter, with Acme thread. The head on end is $\frac{13}{16}$ diameter to receive sliding bar, made of $\frac{5}{16}$ diameter steel and is $4\frac{1}{2}$ inches long.

A hardened steel block is provided with V-shaped grooves of various sizes for holding round or irregular shaped work in drilling, shaping, etc.

The base of Vise is $7\frac{1}{4}$ inches long. $2\frac{3}{4}$ inches wide; extreme height is 3 inches. The jaws are $2\frac{3}{4}$ inches wide, $1\frac{7}{8}$ inches deep, and opens $3\frac{1}{8}$ inches.

Each $5.35

Weight each, 9 pounds 2 ounces; one in a Fibre Box.

This is the No. 993 "YANKEE" Vise mounted on Swivel base for use on Bench, and its upper part (No. 993) quickly detachable for use on Drill Press, Shaper, etc., and putting back again on Swivel Base.

This is an entirely new feature in Vises, and one that will be quickly appreciated by Toolmakers and Machinists, where work can be rigidly held in a vise that can be used either on bench or machine. This unique feature makes it useful and desirable, no matter what other vises may be used in the shop.

Each $7.20

Weight each, 13 pounds 6 ounces; one in a Fibre Box.

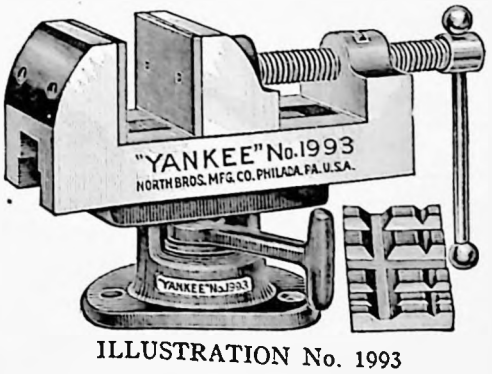
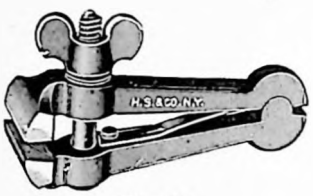


ILLUSTRATION No. 1993

Hand Vises

H. S. & Co.

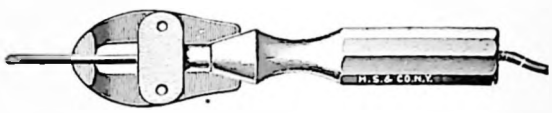


No. 80

Made of Forged Steel, Black Finish

Length, Overall, inches	4¼	5½	6
Each	$0.68	$0.85	$1.05

Lowell Pattern



The octagon handle can be clamped in a vise. Pins and wire 3/16-inch and smaller can be passed through the handle.

No. 50. Hardened steel jaws opening ⅜ inch. Carbon finish.

Each $1.25

Alford

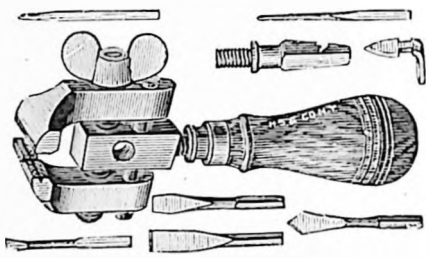


ILLUSTRATION No. 1

Cocobolo handle; jaws of forged and tempered steel; screw of steel; exposed metal surfaces polished and nickeled. Detachable, hollow handle, with screw cap, containing chisel, screwdriver, countersink, square reamer, brad awl, scratch awl and washer cutter. Handle may be screwed into the Vise at right angles. Bit shank to be screwed into the tool either in the position of the handle, as shown in the illustration, or at right angles, permitting the vise to be used in a bit brace.

Length, 6¾ inches; width of jaws, 1¼ inches; jaws open, 1⅛ inches; packed one in a pasteboard box.

Each $3.70

Pin Vises

Lowell

Regular

Nickel-plated Forged Jaws; hole through handle.

Each $2.00

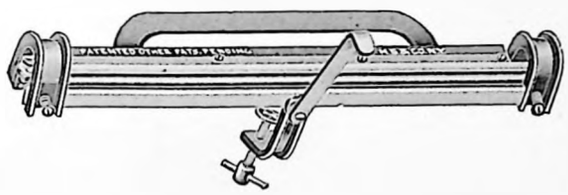
Starrett

Have hardened jaws with chucks holding firmly anything inserted in them. Convenient for holding scribers, small files. taps, etc. Hole entirely through handle. Nickel-plated.

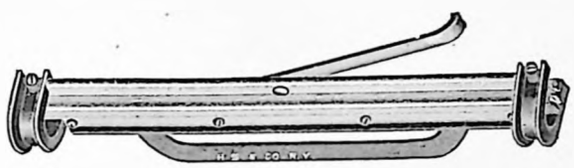
No. 162A, 0 to .040 inch	$0.56
No. 162C, .050 to .125 inch	.56
No. 162B, .030 to .062 inch	.56
No. 162D, .115 to .187 inch	.72

Saw Vises

H. S. & Co. All-Steel Folding



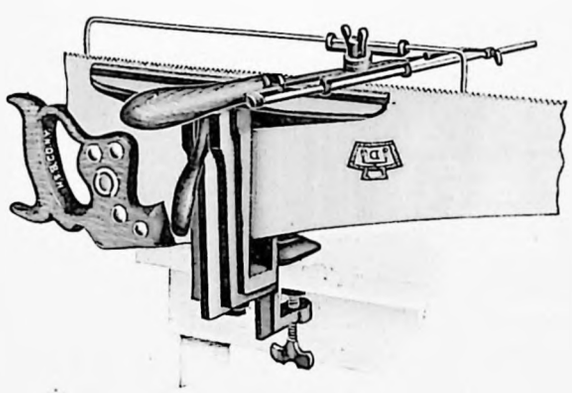
Front View—Ready for Use



Back View—Folded

No. 77. 11⅝-inch jaw, black enamel and polished nickel; rubber pad under the back jaw, very compact, light and strong, suitable for use in portable chest or tool box.
Each $1.60

Disston

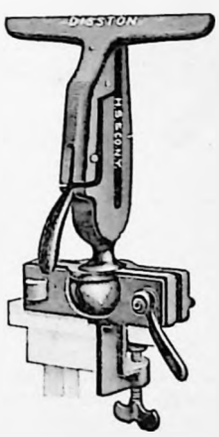


Especially designed to assist those not skilled in the art of saw filing. To file a saw correctly, use a 5½ slim taper file.

Each

D 3 With Saw-filing Guide..... $4.90

Disston



By the use of this Improved Ball and Socket Clamp, a saw can be held straight or at any angle the operator may desire. Japanned. Length of jaw, 9 inches.

No. 1 Each $2.50

Woodworkers' Vises

Richards-Wilcox Rapid Acting

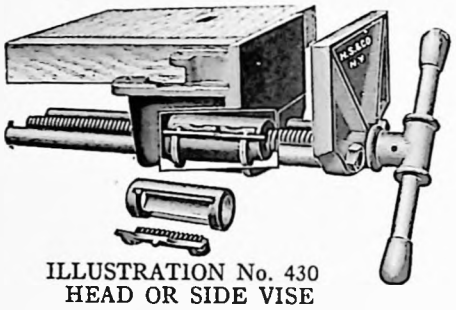


ILLUSTRATION No. 430
HEAD OR SIDE VISE

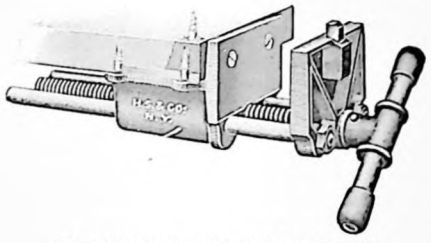


ILLUSTRATION No. 430-S
TAIL VISE WITH BRASS
STOP IN FRONT JAW

This Vise provides instantaneous adjustment, and is continuous in action. Phosphor Bronze Nut engages entire circumference of screw and operates entire length. No pawls, racks or triggers to break or wear. Nut is released and completely disengaged when pressure on work is removed by slight reverse movement of handle. No stripping or cutting of threads. When pressure is applied it causes the nut to engage and lock the screw more firmly and is not held in position by any external mechanism. Screw is 1-inch diameter and has single thread, four to inch, except No. 530, which is ½ inch, 8 threads. Guides are of cold rolled steel. Jaws of best grey iron with working surfaces ground and finished. Special design of ribs on jaw secures minimum deflection under pressure without great weight.

Nos.	Size	Jaws, Inches	Opens, Inches	Weight, Pounds	Each
430	2	5 x 10	12	39½	$7.50
430S	2	5 x 10	12	39½	8.20

Sheldon Rapid Acting

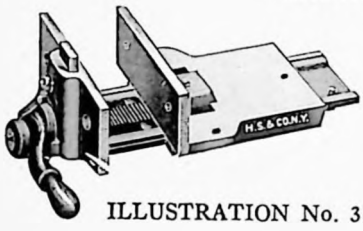


ILLUSTRATION No. 3

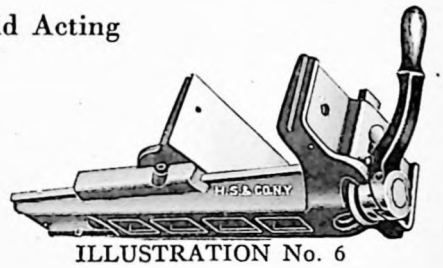


ILLUSTRATION No. 6

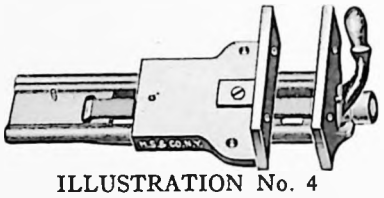


ILLUSTRATION No. 4

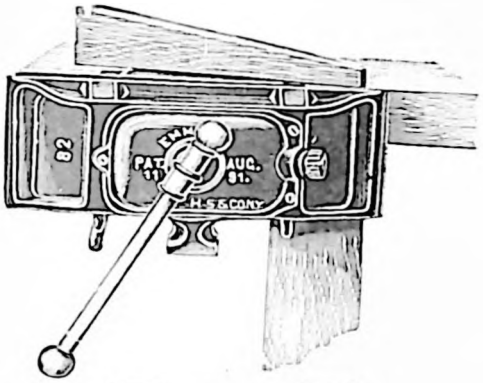
This Vise is constructed on the principle of a Machinists' Vise, the outer jaw and slide being in one piece. When the vise jaw is brought in contact with the work, the first part of the movement of the handle raises the milled rack into engagement with a fourteen-tooth steel section. The following part of the movement draws the front jaw against the work by means of the cam in front of the handle. The movement of the slide is absolutely free when the handle is in a vertical position. Holes through jaws permit wooden faces to be easily attached.

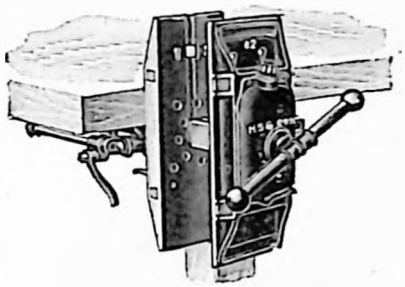
Nos.	Opens, Inches	Jaws, Inches	Weight, Pounds	Each
3	8½	3 x 7½	27	$8.35
4	9	3 x 7½	25	7.15
6	12	4 x 9	35	10.75

 Above prices are subject to change without notice

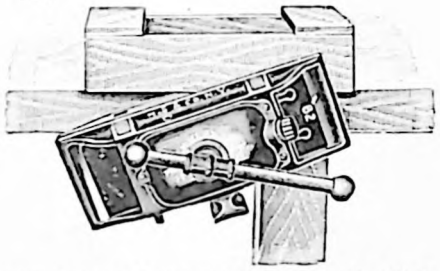
Woodworkers' Vises

Emmert Universal

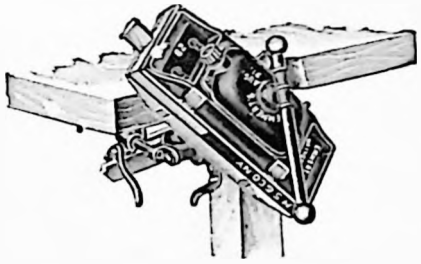




Vise reversed to hold work above the bench



A very convenient position to hold boxes or drawers



Vise holding odd-shaped work in a form at an angle

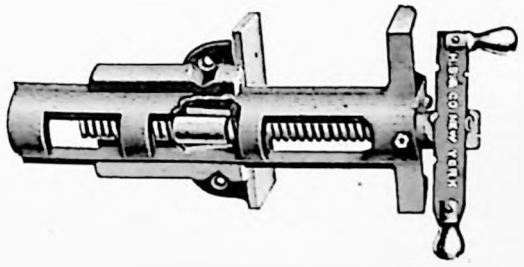
This Vise, when in natural position on the side of the bench, is just flush with the top of the bench. In this position it can be unlocked in an instant and changed into a variety of fixed positions, always presenting the work in a position to enable the mechanic to work with comfort.

The No. 1 has seven pairs of jaws, any pair of which may be instantly adjusted to the position wanted. One pair of these jaws is 18 inches wide; three other pairs are each 7 inches wide; two others are each 1 inch wide; one 3 inches wide steel faced and slightly roughed for holding metal work.

The No. 2 has one pair less of holding dogs so arranged that they may be secreted when not required for service.

Number	Size of Jaw, Inches	Opens, Inches	Weight, Pounds	Each
1	7x18½	14	86	$28.20
2	5x14	12	56	25.65

Sheldon Continuous Screw



With heavy phosphor bronze nut. Crank of tempered spring steel, with polished malleable iron handles, sliding through a malleable iron collar. The crank can be instantly set to a central position for rapid turning, or to either of the outer positions for great pressure.

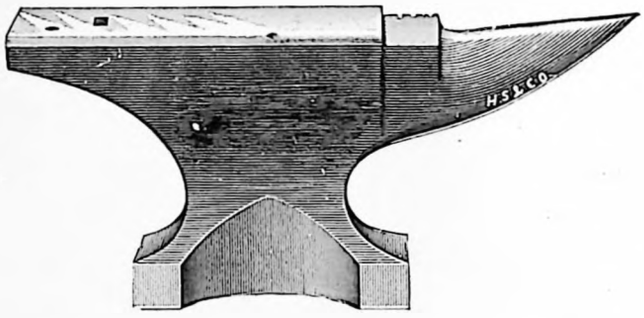
Number	Opens, Inches	Jaws, Inches	Weight, Pounds	Each
10	8½	3x7½	27	$8.35

Maple facings attached, 25 cents extra.

Babbeted maple facings, protecting the top as well as the face, 75 cents extra. Allow ⅜ inch to the bench top for this facing.

Anvils

Hay-Budden



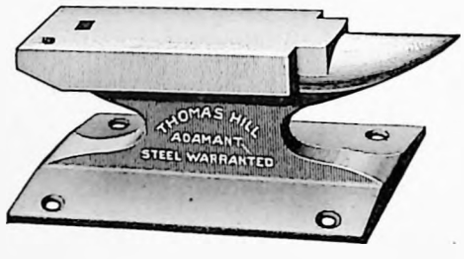
Hay-Budden Anvils are a solid forged steel top welded at the waist to a solid wrought-iron base. The entire top being one piece of high grade forged steel, makes it impossible to have a loose face.

Dimensions given are approximate and are not guaranteed. Intermediate weights can be supplied, but we stock only listed weights.

Weight, Pounds	Face, Inches	Horn, Inches	Hardie Hole, Inches	Pritchel Hole, Inch	Each
75	3⅜x11	7½	¾	$\frac{7}{16}$	$13.13
100	3⅝x13½	9	¾	$\frac{7}{16}$	17.00

We can supply heavier weights up to 800 pounds.

Hill

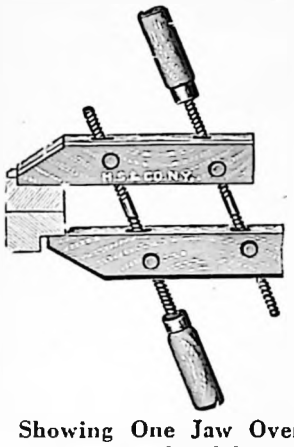


These Anvils are not cast into this shape, but are forged from solid steel, and have a suitable anvil temper throughout. The horn is two inches long, in addition to length of face; the face, sides and horns are polished, the base japanned.

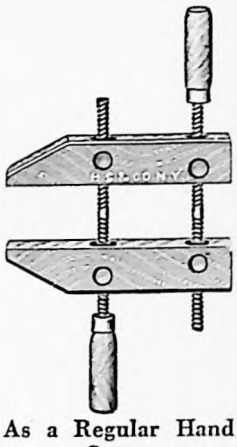
Number	Length, Inches	Width, Inches	Weight, Pounds	Each
2	6	2	5½	$4.40

Hand Screws

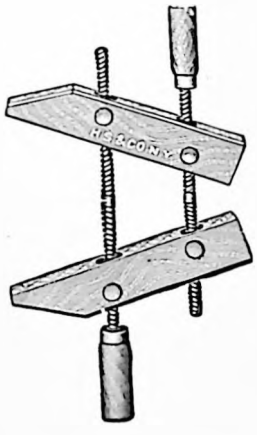
Jorgensen Adjustable



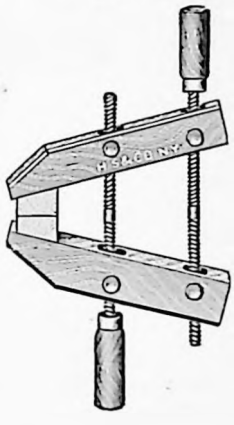
Showing One Jaw Overlapping the Other



As a Regular Hand Screw



Showing Jaws in Position for Beveled Work



The big feature of the "Jorgensen" is that the jaws can be adjusted to any angle

This is a decided advantage, as it saves the time usually spent in squaring-up irregular surfaces. A single clamp will adjust to any of the positions shown, or any modification of them. One jaw can also be made to overlap the other.

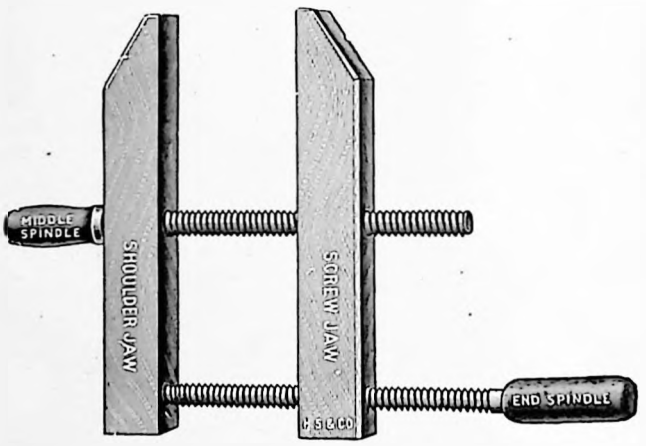
More than that, these Jorgensen Hand Screws are made with Steel Spindles which are practically indestructible. They have a Right and Left thread, and open and close almost twice as fast as the old style clamps—more time saved.

The sockets are also of steel and the jaws are of well-seasoned maple. Unlike common wooden hand screws, the threads will not strip, as glue will not adhere to the steel spindles.

No.	Length of Jaw Inches	Opening Between Jaws Inches	Per Dozen	Each
000	6	3	$11.40	$1.15
00	7	3½	12.00	1.21
0	8	4	12.55	1.27
1	10	6	14.85	1.50
2	12	8	16.55	1.67
3	14	10	18.25	1.84
4	16	12	21.65	2.19
5	18	14	25.10	2.53

Wooden Hand Screws

H. S. & Co.



Jaws are made from seasoned maple. Spindles are made of second growth hickory and are interchangeable.

Nos.	Length of Jaw, Inches	Size of Jaw, Inches	Length of Spindle, Inches	Diameter of Spindle, Inches	Opens, Inches	Per Dozen	Each	Extra Spindles Per Dozen Pieces	Extra Jaws, Each Piece
805	18	2⅜x2⅜	20	1⅛	10½	$22.95	$2.14	$5.74	$1.44
807	16	2¼x2¼	18	1	9¼	20.00	1.86	5.00	1.25
809	14	2x2	16	⅞	8¼	17.00	1.58	4.25	1.07
811	12	1¾x1¾	14	¾	7¼	14.45	1.35	3.62	.91
812	10	1⅝x1⅝	12	¾	5½	12.35	1.15	3.09	.78
813	8	1⅜x1⅜	10	⅝	4½	10.20	.95	2.55	.64
814	7	1⅛x1⅛	8	⅝	3	8.10	.75	2.03	.51
816	4	⅞x⅞	5	⅜	1¼	5.95	.55	1.50	.38

Above prices are subject to change without notice

Wood Bar Carpenter's Clamps

Stearns

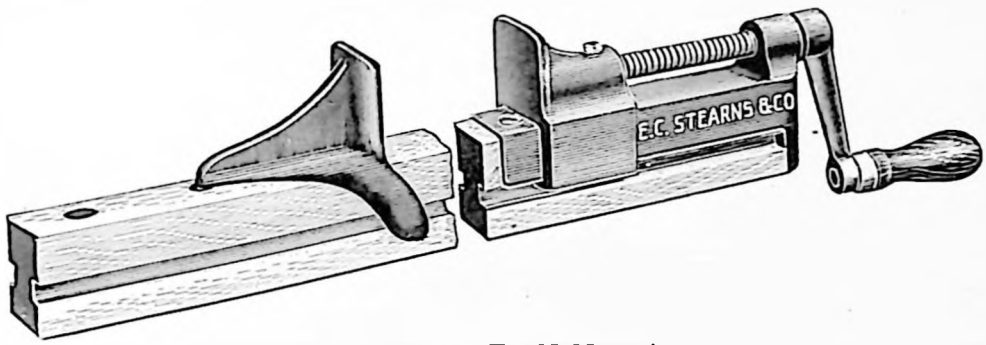


ILLUSTRATION No. 35

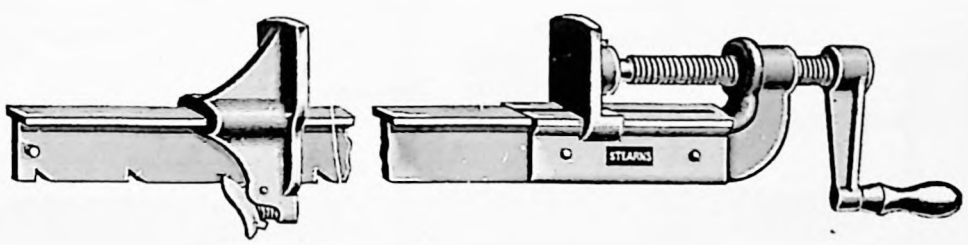
This Clamp is suitable not only for framing, for cabinet and piano work, manufacturing furniture, sash, door, blinds, etc., but for all purposes in which wood work is required to be firmly held in a powerful clamp. The bottom of the wood bar is perfectly smooth, the clamps may be set flat on the bench and the work put in them from the upper side.
The bar is made of thoroughly seasoned and carefully selected hard wood, oil finished, 1¾ x 2⅜ inches iron, carefully japanned. Steel screw and malleable fittings.

Open, feet	4	5	6
Each	$2.57	$3.00	$3.14
Iron Fixtures Only, each	1.60	1.60	1.60

Clamps longer than above can be furnished upon special request.

Steel Bar Clamps

Stearns



The bar is rolled from a special quality of stiff steel; the "T" shape has much more strength for a given weight than is possessed by flat stock.
The notches are cut on the lower edge of the bar, affording greater holding power to the sliding jaw than if they were on the upper edge.
The steel screw is provided with a deep and powerful thread; the cranks, sliding jaws and pawls are malleable, and the handle of wood ebonized. The sizes given below represent a maximum width of work which each size will take. Regular size, ⅞ x 1½ inch bar, ⅝-inch screw.

Open, feet	1½	2	2½	3	4	5
Each	$2.15	$2.25	$2.25	$2.40	$2.70	$3.00

Extra heavy, for large or heavy work, ¼ x 1¾ inch bar, ¾-inch screw.

Open, feet	6
Each	$6.20

Quick Acting Clamps

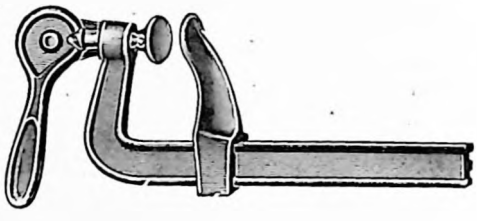
Colt Improved Malleable Iron

Made from best malleable iron, double flanged on each side, giving the requisite strength without excessive weight. The opening of movable jaw is ribbed, pressing on front and back of bar to reinforce the gripping power of the lugs between flanges, and supporting the jaw at right angles to bar. The jaw slides easily on the bar, and work is set rapidly and firmly.

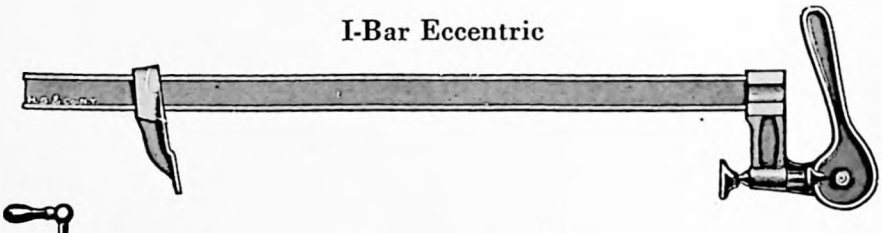
The No. 1012 clamp is used extensively by concrete and cement workers.

Numbers	1002	1004	1006	1008	1012
Opens, inches	2¼	4	6	8	12
Reach, inches	1	1¾	2⅜	3	3
Per dozen	$5.05	$6.75	$9.25	$11.75	$14.30
Each	.50	.65	.90	1.15	1.40

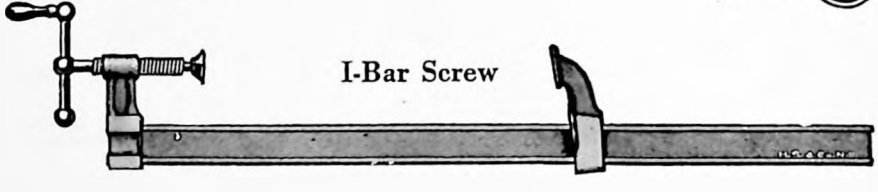
Eccentric



I-Bar Eccentric



I-Bar Screw



Made with sliding foot and fixed head. The clamp is instant in action and perfect in work. The sliding foot with its improved locking device will grip the bar at any point without the necessity of notches which weaken the bar or springs to get out of order.

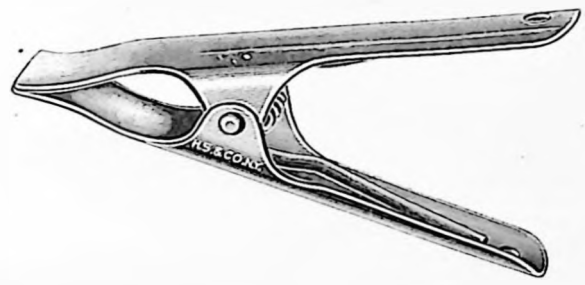
1¼-Inch I-Bar, 2-Inch Reach

Number Eccentric	Number Screw	Opens, Inches	Per Dozen	Each
1218	1318	18	$17.65	$1.75
1224	1324	24	20.65	2.00
1236	1336	36	25.20	2.50
1248	1348	48	30.25	3.00
1260	1360	60	35.30	3.45
1272	1372	72	40.35	3.95

Above prices are subject to change without notice

Clamps

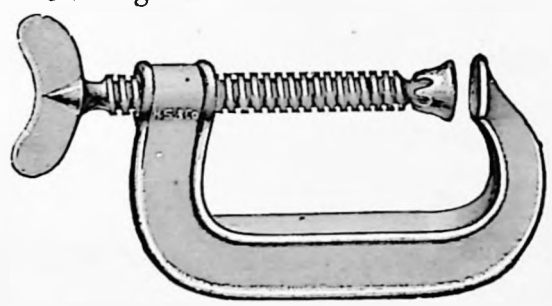
Gee Handy



Practically indestructible, suitable for a large variety of small work. May be attached and detached instantly. Made from stamped steel, with highest grade oil tempered springs, having strong tension.

Numbers	1	2	4
Opens, inches	1	1½	1¾
Per dozen	$1.62	$2.70	$6.50
Each	.15	.25	.60

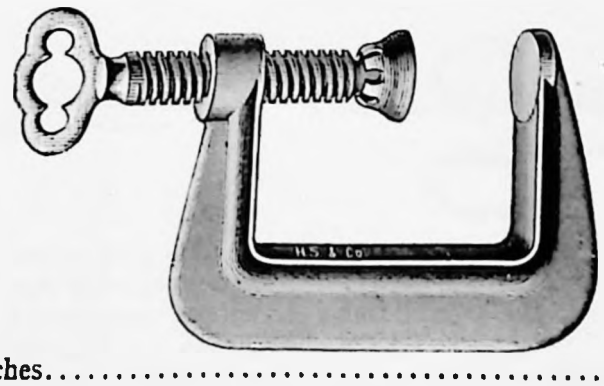
Carriage Makers. Malleable Iron



With Ball and Socket Swivel

Numbers	11	12	13	14	15	16
Opens, inches	2	2½	3	4	5	6
Per dozen	$2.38	$4.10	$4.64	$6.48	$8.20	$10.58
Each	.22	.38	.43	.60	.76	.98
Numbers			17	18	20	22
Opens, inches			7	8	10	12
Per dozen			$12.96	$16.42	$21.06	$27.00
Each			1.20	1.52	1.95	2.50

Quilt Frame. Cast Iron Japanned



		Per Dozen	Each
No. 32	Opens 1⅞ inches	$1.08	$0.10
No. 33	Opens 2¾ inches	1.30	.12

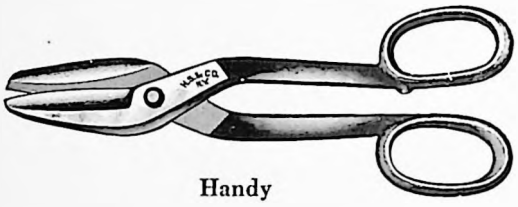
Metal or Tinners' Snips

H. S. & Co.

Every Snip is *Guaranteed to be Satisfactory in Every Particular*

The Length of Cut is the Standard Cutting Edge of Blade

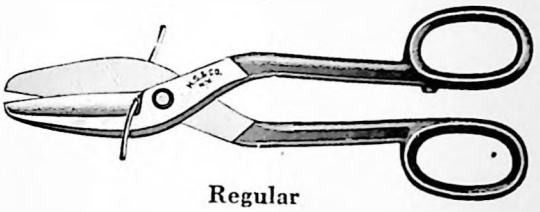
Drop-forged steel, with bar tool steel laid polished blades. Blued handles. For use by right-handed mechanics.



Handy

A convenient, all-around tool, cutting straight, curved and irregular shapes.

Nos.	Full Length, Inches	Length of Cut, Inches	Per Pair
17	14	4	$3.15
18	13	3½	2.62
19	12	3	2.36
110	11	2½	2.10



Regular

Nos.	Full Length, Inches	Length of Cut, Inches	Per Pair
6½	15½	4½	$3.15
7	14	4	2.62
8	13	3½	2.10
9	12	3	1.84
10	11	2½	1.68
11	9	2¼	1.26
12	8	2	1.10

Searight Compound Leverage

ILLUSTRATION No. 8

Temper finished blades. Japanned handles.

Nos.	Full Length, Inches	Length of Cut, Inches	Per Pair
*7	7	1½	$2.25
8	8	1¾	3.38
10	10	2½	5.05
12	12	3	6.75

*No. 7 is pocket size, similar to No. 8.

Except pressed from crucible sheet steel.

Searight Compound Leverage

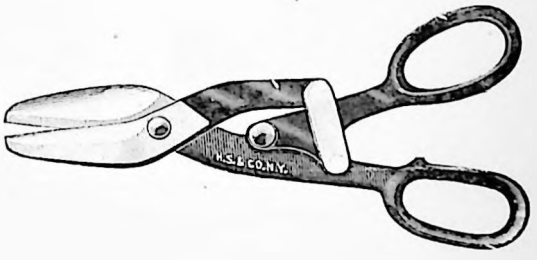


ILLUSTRATION Nos. 10 AND 12

Dental

H. S. & Co.

No. 832

No. 832 For cutting very light metal. Japanned handles, polished blades, cut 2½ inches. With screw and nut.

Length, inches	7½	8
Per pair	$1.03	$1.13

H. S. & Co. Auto

No. 111 Same quality as regular (line shown above), but made shorter and very powerful, small in size, but unusually large in range of work. Length over all, 7 inches.

Length of cut, 2 inches. Per pair.....$1.18

Soldering Coppers

H. S. & Co.

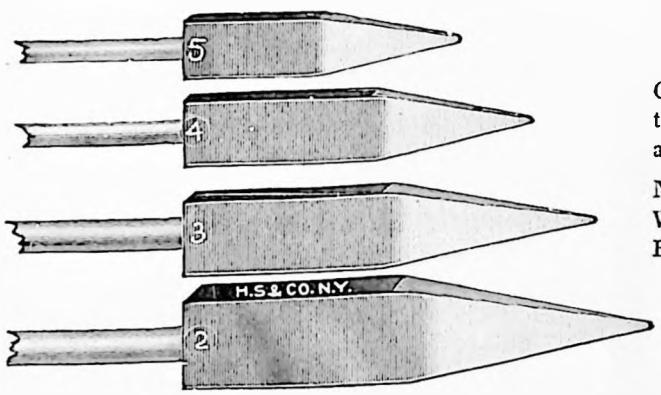
Pointed Pattern

Hand-forged, guaranteed not to crack in repointing.

Without Handles

Weight, each, pounds..	½	¾	1	1½	2	2½	3	4	5
Each	$0.24	$0.30	$0.35	$0.44	$0.54	$0.68	$0.80	$1.08	$1.35

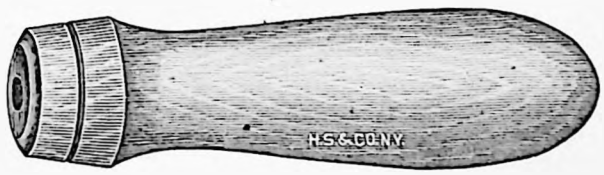
Jewelers'



On account of their smallness, these coppers are admirably adapted for household use.

Nos.....	1	2	3	4
Wgt., oz.	5½	3	1¾	1
Each	$0.72	$0.60	$0.48	$0.33

Soldering Copper Handles



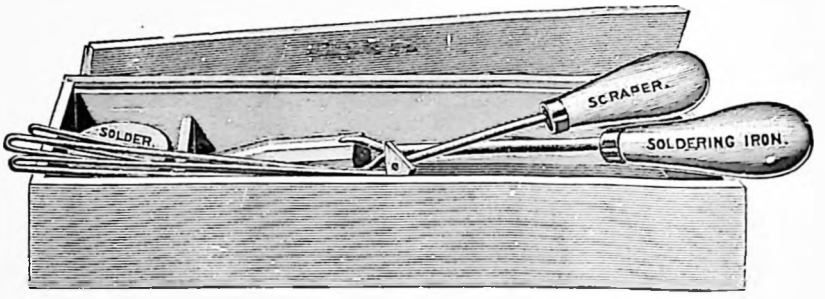
Oak

5½ inches long, wire ferrule, 1½ inches diameter.

Per gross	$6.00
Per dozen	.60
Each	.06

Soldering Outfits

H. S. & Co.



Each outfit is packed in a small wooden box and consists of a soldering copper, solder, rosin and a scraper.

No. 11 Per set $0.70

Tinol

Set consisting of a tin of Tinol Paste, with Alcohol Lamp, in pasteboard box. Tinol is a metal, not a cement, and melts under heat, uniting readily with clean, hot surfaces of tin, brass, copper, iron or steel, but will not solder aluminum.

Set $1.60

Tinol Soldering Paste

Tinol is a complete solder in paste form. It is an alloy of tin and lead, finely granulated, then mixed with an oily flux, which gives it the consistency of soft paste.

Tinol is also made in hollow rods and wires, filled with the same oily flux, for use where this form is more convenient.

In using Tinol, no acid, rosin, or other flux is required. A thin coating of the paste is spread on the surface of the metal to be soldered, and then heated. The compound melts, the oily flux evaporates, and the solder hardens and adheres closely to the metal.

	Per Dozen	Each
Small Tube	$2.00	$0.20
4 oz. Can, medium.....	4.00	.40
1 lb. Can	12.00	1.20

Soldering Salts

Yager

Warranted to excel all other preparations for soldering tin, copper, brass, iron and steel. Is cheaper than acid and better than resin.

Is a dry salt in small bulk, and by simply adding a little water is instantly ready for use.

Is free from the disagreeable fumes and the injurious effects experienced by the use of acid.

Leaves the metal clean and bright, and causes the solder to flow more evenly.

Does not injure the irons like acid, and is unexcelled for tinning them.

Recommended for lead burning to prevent the lead from oxidizing in front of the flame or blow-pipe.

Can be used on damp surfaces.

To solder steel, the metal should be heated enough to melt the solder. Iron must have clean surface, free from scale, rust and dirt. Makes a tight joint which will not heat up or corrode under the electrical current. The best flux for commutator windings. Gives a low resistance that saves current.

We are prepared to name very moderate prices for quantities.

	Each
½-pound can	$0.40
1-pound can	.60
5-pound can	2.50

Caution—To preserve the Salts in granular form, it must not be exposed to strong sunlight or kept in a heated place, as exposure will form vapor between Salts and cork. This, condensing, dissolves the Salts which will then solidify.

Soldering Paste

Nokorode

Absolutely non-corrosive. Will solder all metals except aluminum —no work too delicate and none too rough. Always ready and convenient.

	Each
2-ounce cans	$0.15
1-pound cans	.85

Solder

Bar

Market Half and Half.
Strictly Half and Half.
Aluminum.

Prices on application.

Strip or Ribbon

Prices on application.

Round Wire

⅛ Inch Diameter

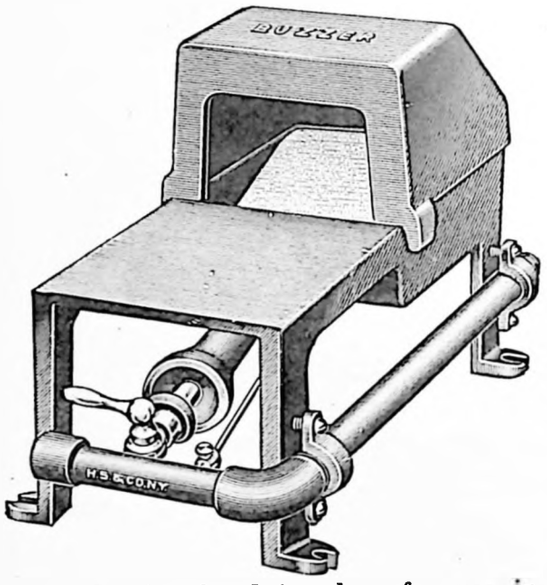
Prices on application.

Gas Soldering Furnaces

Buzzer Automatic Blast

Equipped with Pilot Light

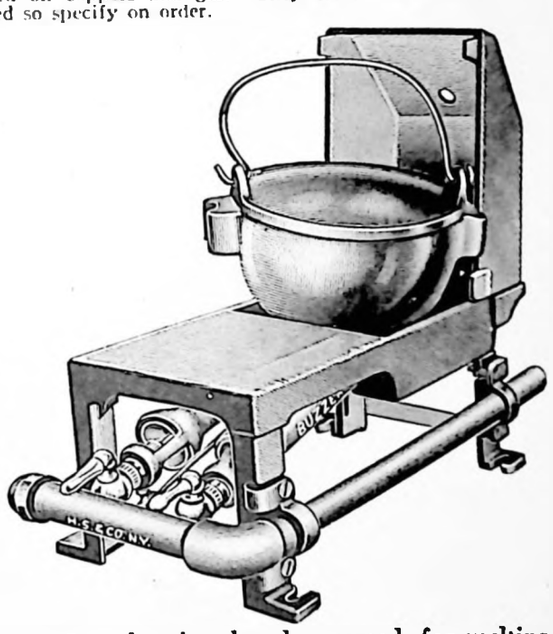
These Furnaces possess high efficiency, simplicity and durability. They are the hottest and quickest heating gas-soldering furnaces ever built without blowers, and with proper care will last a lifetime. They will pay for themselves many times over in the saving effected on coppers and gas. They create their own blast. Built for artificial or natural gas. If natural gas is used so specify on order.



Cut showing hood in place for use in soldering coppers

With abrasive rest, which prevents tinning being drawn from the soldering coppers. The heating chamber is 3½ inches wide, 5¼ inches deep, and will take coppers up to 5 pounds in weight per pair. Total weight is 13 pounds.
The construction is such that the flame is drawn around and over the coppers.

No. 1 Each $6.85

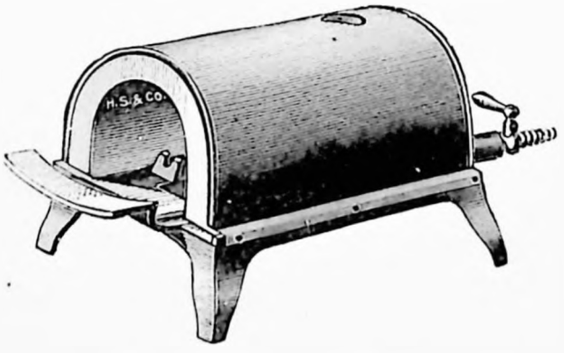


Cut showing hood reversed, for melting lead, babbitt metal, etc.

With abrasive rest, preventing the tinning being drawn from the soldering coppers. The heating chamber is 4½ inches wide, 7 inches deep, and will take coppers up to 14 pounds in weight per pair. Same general design as No. 1 except with double burner, which makes it the hottest and quickest heating gas furnace of its size. Specially adapted for dressing tools and general shop use. Total weight is 15 pounds.

No. 2 Each $9.12

Vulcan



Very substantial. Burner is protected against solder, brick lined interior.

No.	Height, Inches	Width, Inches	Depth, Inches	Capacity	Each
46	4	5	7	2 No. 8 Irons	$6.00

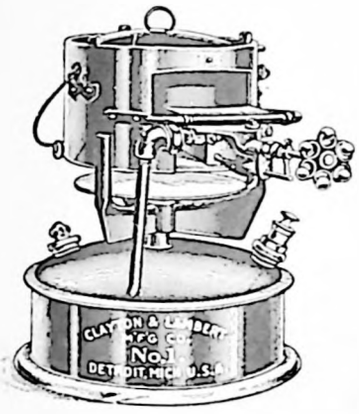


ILLUSTRATION No. 1

Fire Pots

C. & L.

Gasoline

No. 1 is adapted to a greater variety of uses than any other Fire Pot made. Tank is made of heavy galvanized iron, thoroughly braced, which enables it to withstand hard usage. Burner is made of special generator metal which holds the heat and works perfectly in windy or cold weather. Swiveled burner permits moving the flame up or down. No. 1 will easily heat a pair of 12-pound coppers and melt a pot of lead at the same time. Capacity, 7 pints; shipping weight, 14 pounds.

Each $14.70

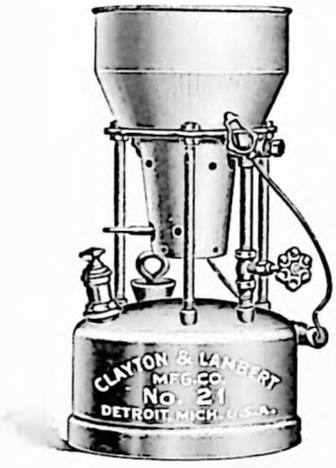


ILLUSTRATION No. 21

No. 21 is the latest, improved, up-to-date Coil Fire Pot, made with seamless drawn steel tank, large funnel and filler, heavy uprights, large valve, and heavy malleable top plate and one-piece steel shield. The burners and coils are made of extra heavy steel and the No. 21 produces a steady blue flame in hard wind or extreme cold. Tank is fitted with patented automatic brass pump. Capacity, 1 gallon; shipping weight, 9¾ pounds.

Each $11.45

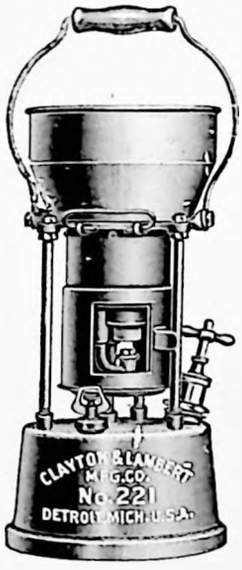


ILLUSTRATION No. 221

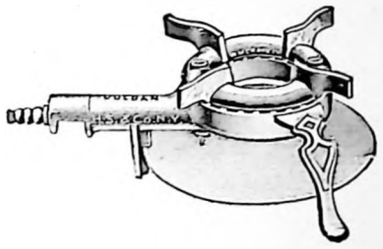
Kerosene

No. 221 Fire Pot contains many improvements that place it in the lead among Kerosene Tools. It is perfect in construction and remarkable in heat-producing qualities, using but little fuel, and will give the user extra good service. The burner is made with a powerful generator that superheats the kerosene gas before it is burned, securing perfect combustion of the fuel and the maximum degree of heat, burning with a clear blue flame free from smoke and odor. All parts are easily accessible for cleaning, and can be removed readily, if desired. The tank is made of heavy gauge steel, with bottom and fittings welded in, not soldered. All parts are made extra strong to withstand severe service. The pump is of brass, with automatic check valve, and of the very best improved construction. A cleaning needle is supplied free of charge. Capacity, 7 pints; shipping weight, 16 pounds.

Each $18.15

Gas Stoves

Vulcan



Single burner, 4 inches high, top 6 inches in diameter.
Consumes 16 feet of gas per hour.

No. 5 Each $1.55

Cast Iron

Melting or Solder Pots

H. S. & Co.

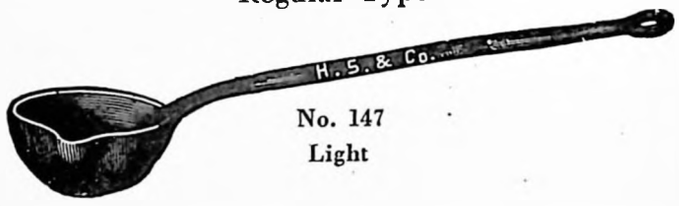
Numbers	0	1	2
Outside diameter, inches	5	6	8
Depth, inches	3⅜	3 9/16	4⅜
Lead capacity, pounds	15¾	25½	44
Each	$0.72	$0.95	$1.58

Sizes and capacity are approximate.

Melting Ladles

H. S. & Co.

Regular Type



No. 147
Light

Warranted steel bowls, either single or double-lipped, with iron handle securely welded, making as solid as though one piece. Loop at end to hang up.

Diameter of Bowl, Inches	Depth of Bowl, Inches	Capacity of Each Bowl, In Lead	Each
2½	⅞	1 lb. 2 oz.	$0.33
3	1	1 lb. 13 oz.	.40
3½	1⅛	2 lb. 15 oz.	.47
4	1½	4 lb. 11 oz.	.53
5	1⅞	7 lb. 11 oz.	.70
6	2¼	10 lb. 7 oz.	.87

No. 148
Extra heavy for use in foundries

Diameter of Bowl, Inches	Depth of Bowl, Inches	Capacity of Each Bowl, In Lead	Each
7	2½	20 lb. 15 oz.	$2.07

 Above prices are subject to change without notice

Torches

C. & L.

Gasoline

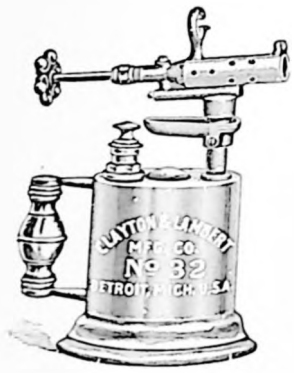


ILLUSTRATION
No. 32

No. 32 Produces a perfect fire, whether used indoors or outdoors, in any weather. Burner is made of special generator metal, which holds the heat and is of the improved type, having a superheated chamber for the gas and protecting the gas passing into the burner. The intensely hot blue flame burns steadily under extreme conditions; automatic brass pump in tank, fitted with check valve and provided with removable cork seat, insures abundant air pressure. Capacity, 1 quart; shipping weight, 5 pounds.

Each $8.65

No. 38 Is exactly like No. 32, except pint size. Shipping weight, 3¾ pounds.

Each $7.80

ILLUSTRATION
No. 120

No. 31 Is exactly like No. 32, except without hook and support for holding a soldering copper. The burner has a special generating chamber that superheats the gas before it is burned, and is fitted with clean-out plugs to facilitate cleaning the burner, should it become clogged from impurities in the gasoline. Capacity, 1 quart; shipping weight, 5 pounds.

Each $8.20

No. 37 Is exactly like No. 31, except pint size. Shipping weight, 3¾ pounds.

Each $7.35

No. 120 Is a good one-quart Torch. While not as powerful as the higher grade torches, good results will be obtained from medium and ordinary work. It is fitted with single-spring check valve which closes off the air automatically after each stroke of the plunger, and is supplied with detachable soldering copper attachment. Shipping weight, 5 pounds.

Each $7.35

No. 122 Is the same as No. 120, except pint size. Supplied with detachable hook and support, a convenience when used for repair work. Shipping weight, 4¼ pounds.

Each $6.50

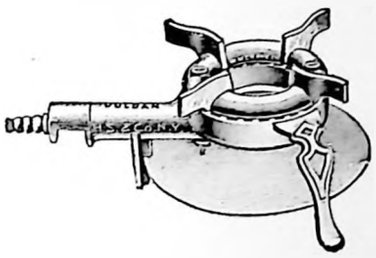
ILLUSTRATION
No. 48

No. 48 Is oblong, 1⅞ inches thick, strongly made of heavy gauge brass and has hook and support to hold soldering copper—a great convenience to the repair man. Hinged supports at the base prevent tipping over. Capacity, 1 pint; shipping weight, 5¼ pounds.

Each $9.95

Gas Stoves

Vulcan



Single burner, 4 inches high, top 6 inches in diameter.
Consumes 16 feet of gas per hour.

No. 5 Each $1.55

Cast Iron

Melting or Solder Pots

H. S. & Co.

Numbers	0	1	2
Outside diameter, inches	5	6	8
Depth, inches	3⅜	3 9/16	4⅜
Lead capacity, pounds	15¾	25½	44
Each	$0.72	$0.95	$1.58

Sizes and capacity are approximate.

Melting Ladles

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Regular Type

No. 147
Light

Warranted steel bowls, either single or double-lipped, with iron handle securely welded, making as solid as though one piece. Loop at end to hang up.

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3½	1⅛	2 lb. 15 oz.	.47
4	1½	4 lb. 11 oz.	.53
5	1⅞	7 lb. 11 oz.	.70
6	2¼	10 lb. 7 oz.	.87

No. 148
Extra heavy for use in foundries

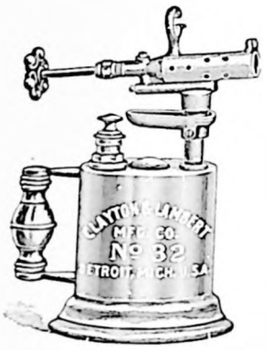
Diameter of Bowl, Inches	Depth of Bowl, Inches	Capacity of Each Bowl, In Lead	Each
7	2½	20 lb. 15 oz.	$2.07

Above prices are subject to change without notice

Torches

C. & L.

Gasoline



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No. 37 Is exactly like No. 31, except pint size. Shipping weight, 3¾ pounds.

Each $7.35

No. 120 Is a good one-quart Torch. While not as powerful as the higher grade torches, good results will be obtained from medium and ordinary work. It is fitted with single-spring check valve which closes off the air automatically after each stroke of the plunger, and is supplied with detachable soldering copper attachment. Shipping weight, 5 pounds.

Each $7.35

No. 122 Is the same as No. 120, except pint size. Supplied with detachable hook and support, a convenience when used for repair work. Shipping weight, 4¼ pounds.

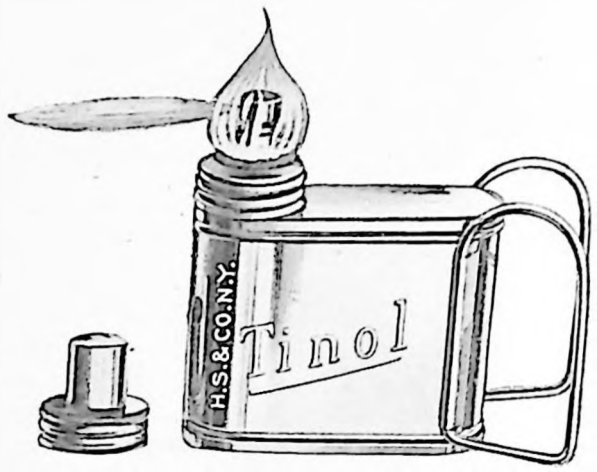
Each $6.50

ILLUSTRATION
No. 48

No. 48 Is oblong, 1⅞ inches thick, strongly made of heavy gauge brass and has hook and support to hold soldering copper—a great convenience to the repair man. Hinged supports at the base prevent tipping over. Capacity, 1 pint; shipping weight, 5¼ pounds.

Each $9.95

Torches



Tinol

Alcohol

This Torch has a self-acting blowpipe flame about 3½ inches long, which gives intense heat without smoke or bad smell. It can be carried in the vest pocket, yet holds sufficient alcohol to burn for two hours. It is lighted or extinguished instantly. A screw cap prevents evaporation or leakage in any position. It is absolutely free from danger of explosion.
It is a useful and convenient tool. Its pointed flame will reach places that are inaccessible to other torches, and it enables the workman to work very rapidly.
It will be found exceedingly useful for heating glue, metals, tools, burning off paint, etc., and many other uses in the workshop besides soldering. It is also very useful for chauffeurs, travelers, campers, and others.

Each $1.20

Gasoline or Alcohol

C. & L.

ILLUSTRATION
No. 14

No. 14 Evaporation of fuel in this torch is impossible, a closely fitting cap screwing down firmly over wick, making the tank air-tight. Made with a chamber through which an air blast is passed charged with alcohol or gasoline, making an intense heat. Size 1¾ x 6½ inches. Polished brass. Capacity, one-quarter pint; shipping weight, 1 pound.

Each $4.30

H. S. & Co.

	Alcohol	Each
No. 1	Length overall 5½ inches, diameter 1½ inches	$2.50
No. 2	Length overall 6¼ inches, diameter 1½ inches	2.55
No. 3	Length overall 5¼ inches, diameter 2 inches	2.75

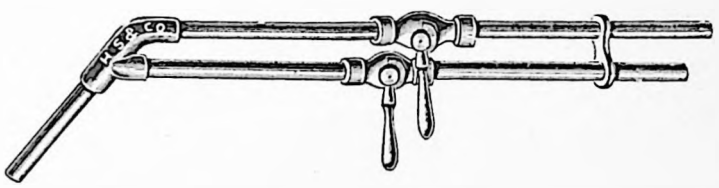
Heavily and substantially made from solid polished brass.
Provided with rubber tube and mouthpiece to blow flame on work.

ILLUSTRATION
No. 3

Blow Pipes

H. S. & Co.

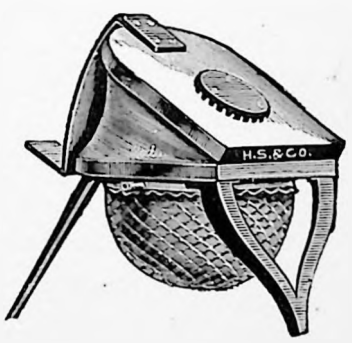
Length, inches	7	8	9	10	11	12
Brass, per dozen	$1.94	$2.05	$2.16	$2.27	$2.48	$2.81
Each	.18	.19	.20	.21	.23	.26



		Each
No. 81	Brass, with ⅛-inch bore (for Bellows see No. 102)	$1.90
No. 82	Brass, with ¼-inch bore (for Bellows see No. 102)	3.35
No. 83	Brass, with $\frac{5}{16}$-inch bore (for Bellows see No. 103)	3.75

Foot Bellows

H. S. & Co.



		Each
No. 102	Suitable for blow-pipes Nos. 81 and 82	$7.85
No. 103	Suitable for blow-pipe No. 83	10.25

Bunsen Burners or Gas Heaters

H. S. & Co. Adjustable

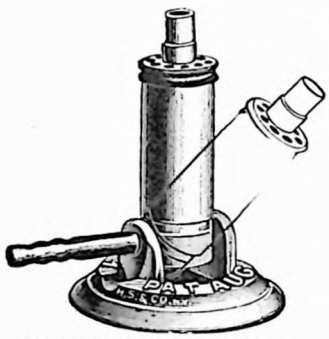


ILLUSTRATION No. 1

With attachments these burners are ideal for the laboratory, office and workshop; are entirely safe, cannot blow out nor can the flame recede, inasmuch as the gas inlet is protected from side draughts. The burners can be inclined or tilted at hinge, which is of great importance, as it prevents foreign bodies obstructing them. The air is admitted at the top of the burner, and, being very near the flame, is superheated before it mixes with the gas, whereby a hotter flame is obtained with less consumption of gas.

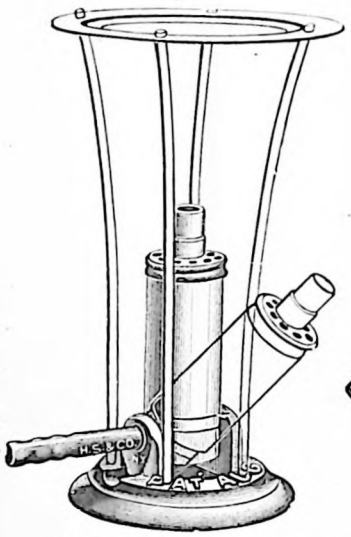


ILLUSTRATION No. 2

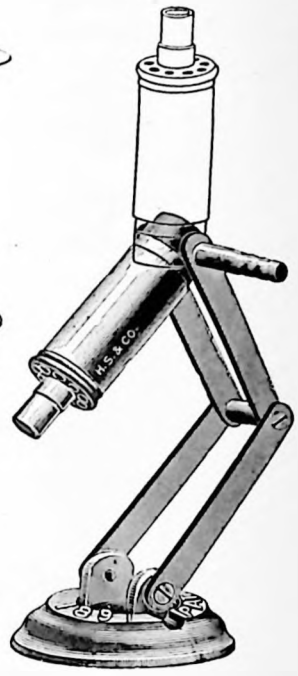


ILLUSTRATION No. 3

		Each
No. 1	Hinged Burner	$1.35
No. 2	Hinged Burner	1.75
No. 3	Triple Hinged Stand	1.75

Stationary

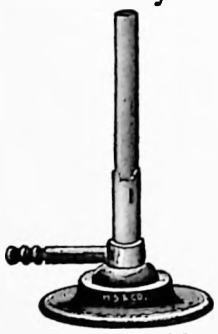


ILLUSTRATION No. 1851

Each $0.60

ILLUSTRATION No. 4

2½ in. high.....Each $1.25

Buzzer

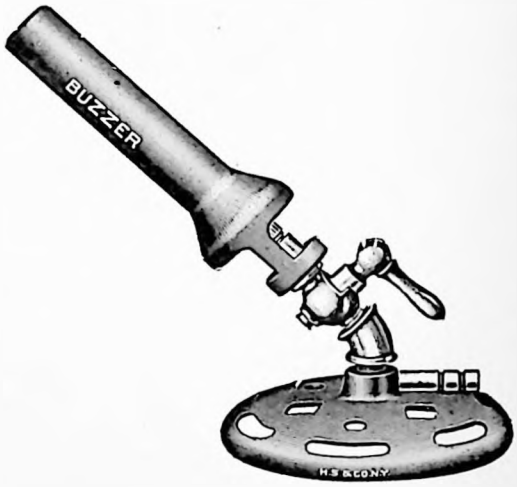


ILLUSTRATION No. 12

Adapted for laboratory or shop use where intense heat is required: annealing, tinning baths, melting lead, etc. Placed on an angle to prevent anything from dropping into the burner which would tend to clog the valve.

Each $2.65

With Pilot Light. Each..... 3.25

Above prices are subject to change without notice

Electric Glue Pots

General Electric

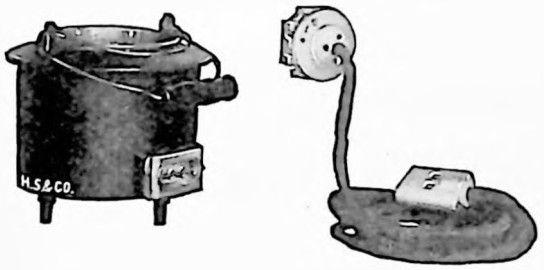
General Electric Pots are manufactured in two distinct types, distinguished by their method of heating the glue. The heating elements in both types are practically indestructible. Aluminum is used in both types for the glue container, both on account of its remarkable power as a heat distributor and because its unctuous surface prevents the glue from sticking to it.

Jacketless

This type has no water jacket and heats the glue by direct thermal contact with the walls of the pot. It is designed only for continuous operation, as it requires from one-half to one hour to bring the glue to a perfect working temperature.

No.	Size	Watts	Each
153497	1 qt.	70	$19.75

Water-Jacketed



This type employs the usual water jacket for heating the glue and permits the use of a "high starting heat" to cause a rapid melting of the glue, as is often required for sudden, intermittent service. The water-jacket is made of cast iron.

No.	Size	Watts	Each
153502	1 qt.	110 / 220 / 440	$20.50

Thermo Electric Glue Pot or Heater—Francis

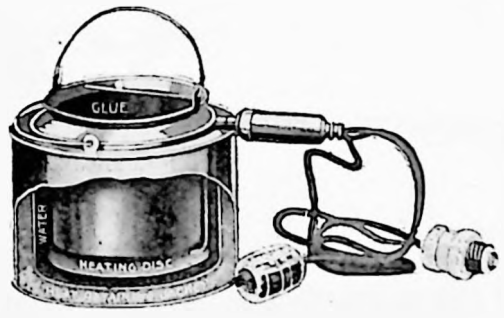


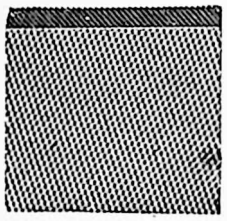
ILLUSTRATION No. 162

A most complete and economical type of electric glue pot. Its design and insulation prevent loss of radiation, waste of current, and keeps consumption of electricity down to a minimum. Simple, convenient, and durable. The electric heating unit may be one of three types—immersion disc (2 heats), immersion coil (1 or 3 heats), or straight form unit (1 or 3 heats). Unless otherwise ordered, the glue cup, water-jacket and heat-retaining jacket are furnished in copper. Each glue pot is supplied with suitable cord, lamp socket plug, and snap switch for 110 volts. Can be supplied with hinged copper cover if desired. Capacity, 1 quart; weight, packed, 13 pounds.

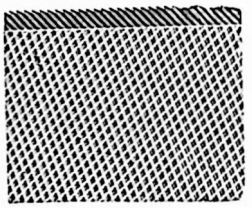
No. 162 Each.....$24.35

Cutting Surfaces of Files

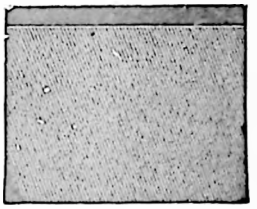
These illustrations indicate the cutting surfaces of Bastard, Second Cut and Smooth hand files.



Bastard



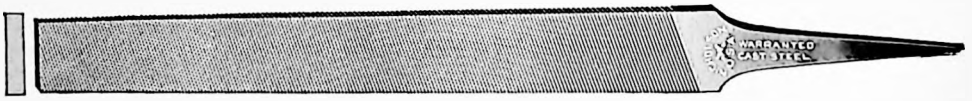
Second Cut



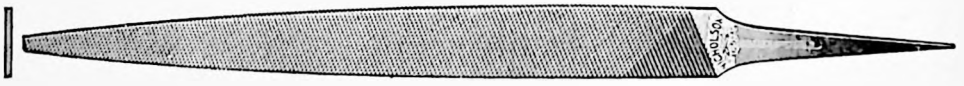
Smooth

Files

Flat Bastard



Hand Bastard



Warding Bastard

Flat Second Cut

Flat Smooth

For Prices See Page 230

Files

Half Round Smooth

Half Round Second Cut

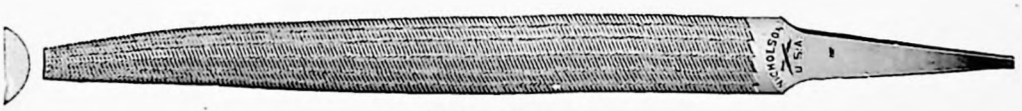
Square Bastard

Round Bastard

Slim Taper

Regular Taper

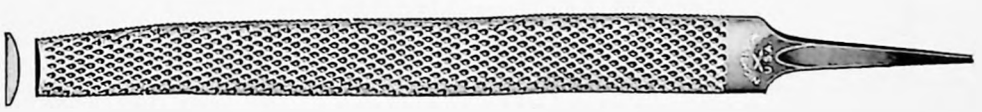
Double Taper



Cabinet Bastard

Rasps

Half Round



Cabinet

Listed on Page 230

Price List of Files and Rasps

Nicholson Increment Cut and Kearney & Foot Files

As Adopted by the File Manufacturers' Association of the United States, November 1, 1899, and Revised January 1, 1919

List Prices are Per Dozen

FLAT				ROUND			
Inches	Bastard	2d Cut	Smooth	Inches	Bastard	2d Cut	Smooth
4	$3.70	$4.30	$4.70	4	$3.00	$3.50	$3.90
5	3.90	4.60	4.90	5	3.20	3.80	4.10
6	4.30	4.80	5.30	6	3.50	4.00	4.50
7	4.80	5.50	6.10	7	3.90	4.60	4.90
8	5.30	6.10	6.60	8	4.30	4.90	5.40
9	6.30	7.20	7.90	9	4.90	5.80	6.30
10	7.00	8.10	8.70	10	5.60	6.40	7.00
12	9.70	11.00	12.10	12	7.50	8.60	9.40
14	13.30	15.30	16.70	14	10.70	12.20	13.10
16	17.80	20.10	22.30	16	14.70	16.80	17.90
18	23.90	26.80	29.20				

SQUARE				HAND			HALF-ROUND				WARD-ING
Inches	Bas-tard	2d Cut	Smooth	Bas-tard	2d Cut	Smooth	Inches	Bas-tard	2d Cut	Smooth	Bas-tard
4	$3.80	$4.60	$4.90	$3.70	$4.30	$4.80	4	$4.80	$5.60	$6.10	$4.00
5	4.10	4.80	5.30	3.90	4.70	5.30	5	5.40	6.10	6.40	4.50
6	4.60	5.10	5.50	4.30	5.10	5.60	6	6.10	6.70	7.10	4.90
7	5.10	5.80	6.30	4.90	5.80	6.30	7	7.00	7.70	8.20	5.90
8	5.50	6.30	7.00	5.40	6.30	6.70	8	7.50	8.30	8.90	6.40
9	....	....	....	6.70	7.80	8.30	9	8.50	9.40	9.90	....
10	7.40	8.50	9.10	7.50	8.70	9.40	10	9.10	10.10	10.70	....
12	10.20	11.50	12.80	10.70	12.30	13.50	12	11.80	13.00	13.90	....
14	13.90	16.10	17.50	15.00	17.00	18.20	14	15.50	17.00	18.30	....
16	18.70	21.20	23.30	20.10	22.80	24.20	16	20.60	22.50	24.20	....

DOUBLE-ENDER, WITH HANDLE	
7 Inches	$3.50
8 Inches	3.90
9 Inches	4.40
10 Inches	4.90

Inches	Taper Single Cut	Slim Taper Single Cut
3	$2.10	$2.10
3½	2.10	2.10
4	2.20	2.20
4½	2.40	2.30
5	2.60	2.50
5½	3.00	2.90
6	3.40	3.10
7	4.30	3.80
8	5.40	4.50
9	6.60	5.40
10	8.10	6.40

FLAT WOOD RASPS			HALF ROUND WOOD RASPS			
Inches	Bastard	2d Cut	Inches	Bastard	2d Cut	Smooth
8	$9.40	$11.40	6	$8.10	$9.30	$10.10
10	12.80	15.50	8	10.10	12.20	13.70
12	17.50	20.90	10	13.70	16.80	18.70
14	23.20	27.80	12	18.70	22.40	24.80
16	30.80	36.20	14	24.80	29.70	32.90

Above prices are subject to the following discounts:

Nicholson Increment Cut, for 6 or more, 50-10%; less than 6, 50%.
Kearney & Foot, for 6 or more, 60-10-10%; less than 6, 60-10%.

File Cleaners

H. S. & Co.

Substantially made of the best material, the carding being firmly secured to the holder. Each brush is provided with a scorer or metal piece for removing chips or pin pieces from the file teeth.

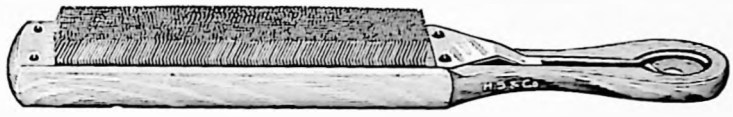


ILLUSTRATION No. 1

	Per Dozen	Each
Wire File Card	$6.48	$0.60

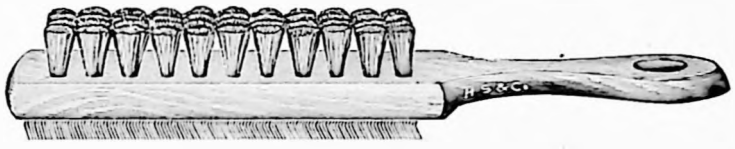
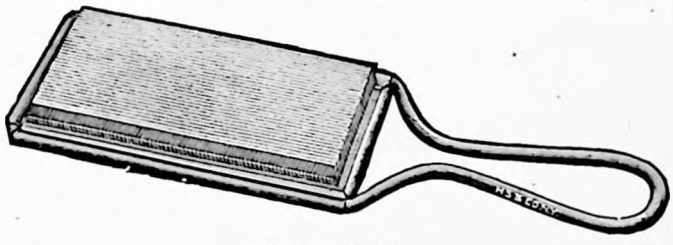


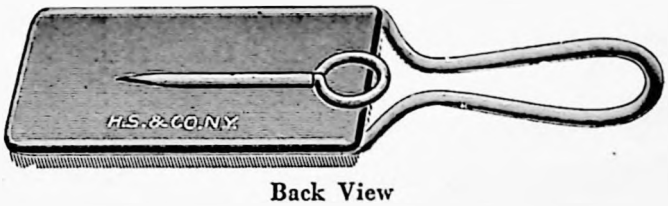
ILLUSTRATION No. 2

	Per Dozen	Each
Wire File Card and Bristle Brush	$9.18	$0.85

Colton



Front View



Back View

Has a steel back frame and face with tempered steel wire brush. Very durable and economical. Each cleaner supplied with a picker to remove solder and other hard substances from file teeth.

	Per Dozen	Each
No. 10	$4.10	$0.42

Hand Forged Scissors

H. S. & Co.

Full Nickel-plated

Pocket

Solid Steel

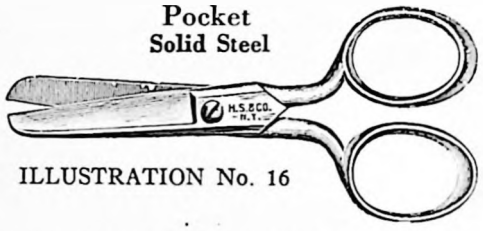


ILLUSTRATION No. 16

Length overall, inches	3½	4	5	6
Per dozen	$7.25	$7.45	$8.00	$8.55
Each	.67	.70	.75	.80

Double Pointed

Solid Steel

Same style as No. 25, shown below.

No. 26

Length overall, inches	4½	5
Per dozen	$7.99	$8.21
Each	.74	.76

Embroidery

Solid Steel

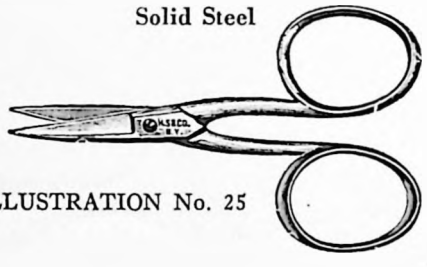


ILLUSTRATION No. 25

Length overall, inches	3	3½	4
Per dozen	$7.24	$7.45	$7.67
Each	.67	.69	.71

Regular Pattern

Solid Steel

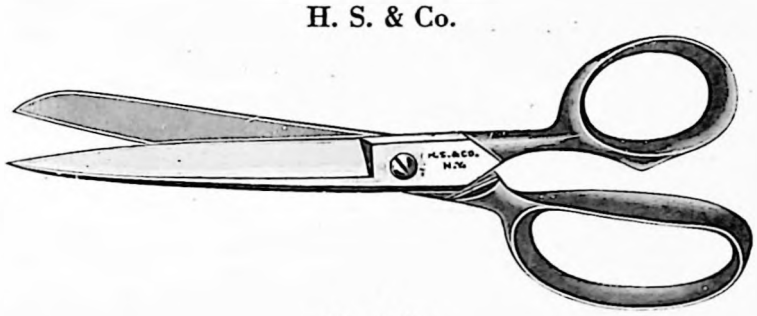
ILLUSTRATION No. 62

Length overall, inches	4	4½	5	5½	6	6½	7
Per dozen	$7.67	$7.99	$8.21	$8.75	$9.29	$10.26	$11.34
Each	.71	.74	.76	.81	.86	.95	1.05

Above prices are subject to change without notice

Trimmers

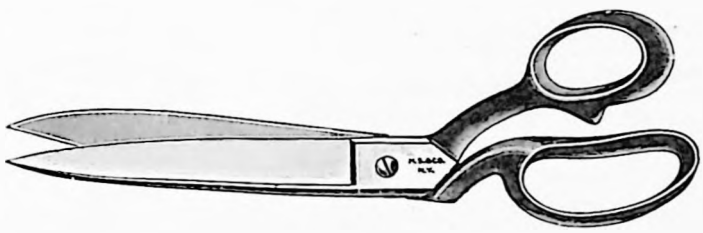
H. S. & Co.



Straight

No. 3 Japanned handles, nickel-plated blades.							
Length overall, inches	6	6½	7	7½	8	8½	9
Per dozen	$8.86	$9.50	$10.04	$10.58	$11.12	$11.16	$13.93
Each	.82	.88	.93	.98	1.03	1.08	1.29
Length overall, inches				10	11	12	13
Per dozen				$17.28	$19.55	$21.17	$23.33
Each				1.60	1.81	1.96	2.16

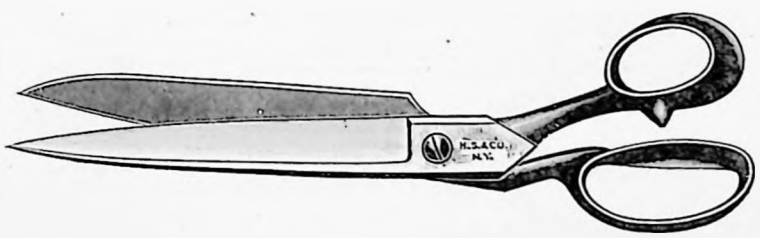
No. 13 Nickel-plated.							
Length overall, inches	6	6½	7	7½	8	9	
Per dozen	$9.63	$10.48	$11.02	$11.16	$12.31	$15.34	
Each	.91	.97	1.07	1.10	1.14	1.42	



Bent

No. 2 Japanned handles, nickel-plated blades.						
Length overall, inches	9	10	11	12	13	
Per dozen	$15.55	$18.90	$20.52	$22.25	$24.41	
Each	1.44	1.75	1.90	2.06	2.26	

No. 112 Full nickel-plated.						
Length overall, inches	6	7	8	9	10	
Per dozen	$10.48	$11.66	$12.96	$17.28	$20.96	
Each	.97	1.08	1.20	1.60	1.94	

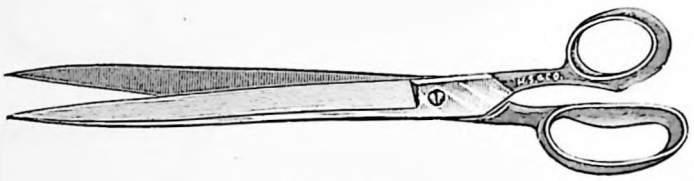


Bent—Extra Heavy

No. 20R Fitted with strong durable steel screw and nut.		
Length overall, inches	10	11
Per dozen	$21.60	$23.35
Each	2.00	2.16

Paper Shears

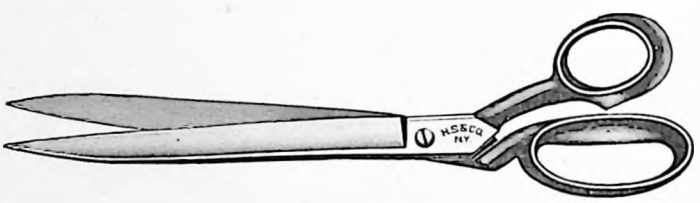
H. S. & Co.



Straight

No. 88 Straight Japanned handles, nickel blades.

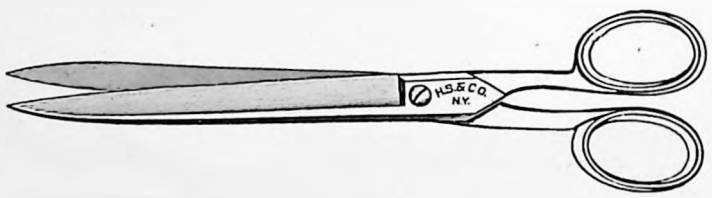
Length overall, inches	10	11	12	13	14
Per dozen	$17.28	$19.45	$23.16	$23.33	$26.61
Each	1.60	1.80	1.93	2.16	2.47



Bent

No. 85 Bent Japanned handles, nickel blades.

Length overall, inches	12
Per dozen	$22.15
Each	2.05



With Ring Handles

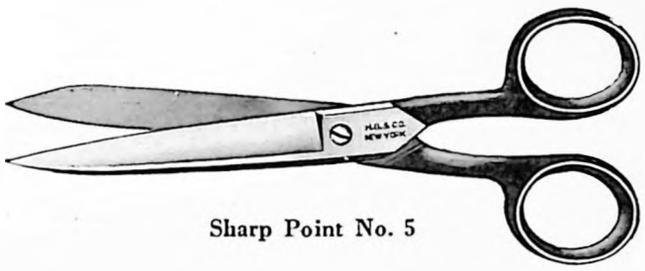
No. 860 Ring handles, full nickel plated.

Length overall, inches	10
Per dozen	$18.90
Each	1.75

Manual Training Scissors

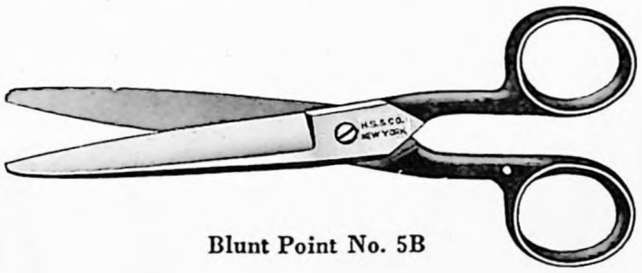
H. S. & Co.

Japanned Handles. Nickel Blades



Sharp Point No. 5

Length overall, inches	5	5½	6
Per dozen	$8.10	$8.21	$8.86
Each	.75	.76	.82

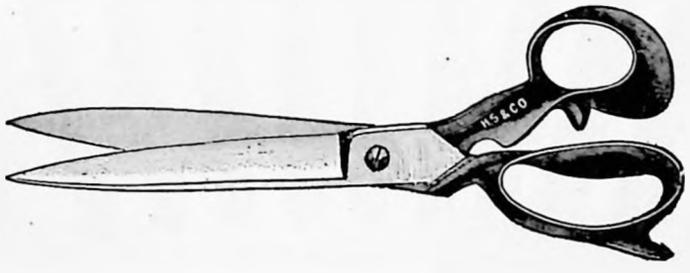


Blunt Point No. 5B

Length overall, inches	5	5½	6
Per dozen	$8.32	$8.86	$9.50
Each	.77	.82	.88

Tailors' or Carpet Shears

H. S. & Co.



No. 4P Japanned handles. Steel screw and nut. Entire length 12½ inches. Per pair $3.70

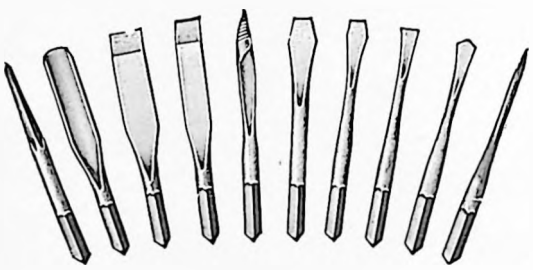
No. 4PBB Ball Bearing. Japanned. Entire length 12½ inches. Per pair..... 4.75

Tool Holders

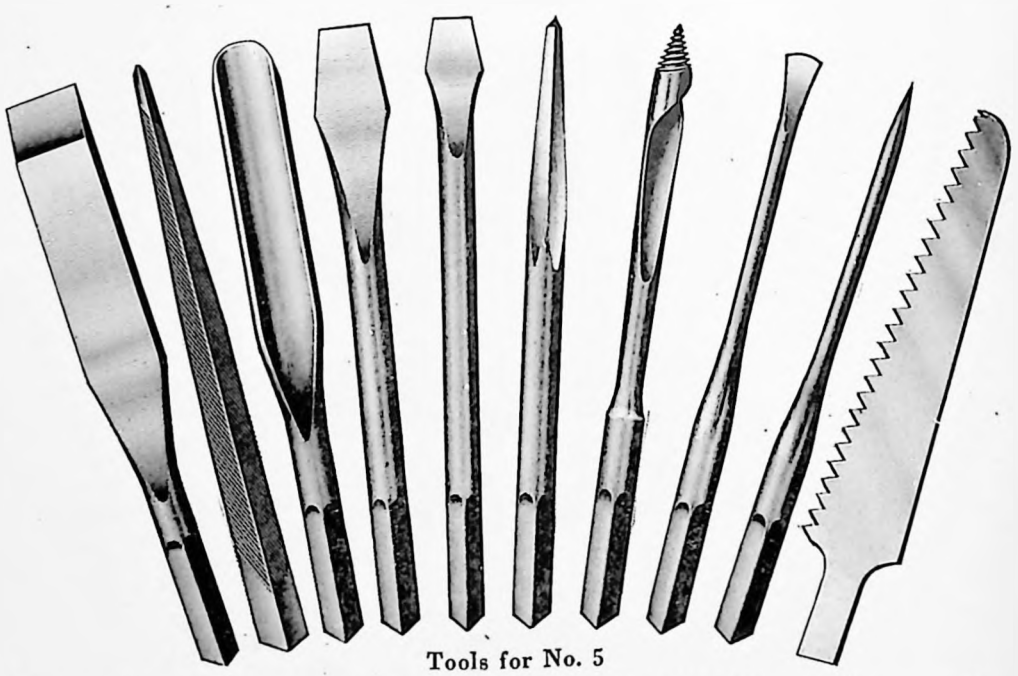
M. F. Co.

ILLUSTRATION Nos. 4 AND 5

Beautifully polished and finished rare tropical wood; heavily nickeled shell and jaws.
Hollow handle, containing tools and closed with a screw cap.
Jaws holding with vise-like grip tools, as shown in illustrations, also a variety of other kinds of shanks.
Socket and shell threads carefully cut so as to mesh perfectly and prevent shell from working loose and allowing tools to disengage themselves from jaws.
Tools made from best steel and carefully tempered and finished and honed to a fine cutting edge.



Tools for No. 4



Tools for No. 5

Nos.	4	5
Length of handle, inches	6¼	7½
Number of tools	10	10
Length of tools, inches	2½	4
Each	$1.74	$2.43

Tool Holders

All Steel

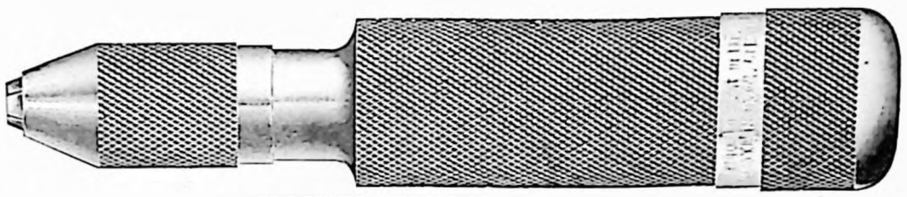
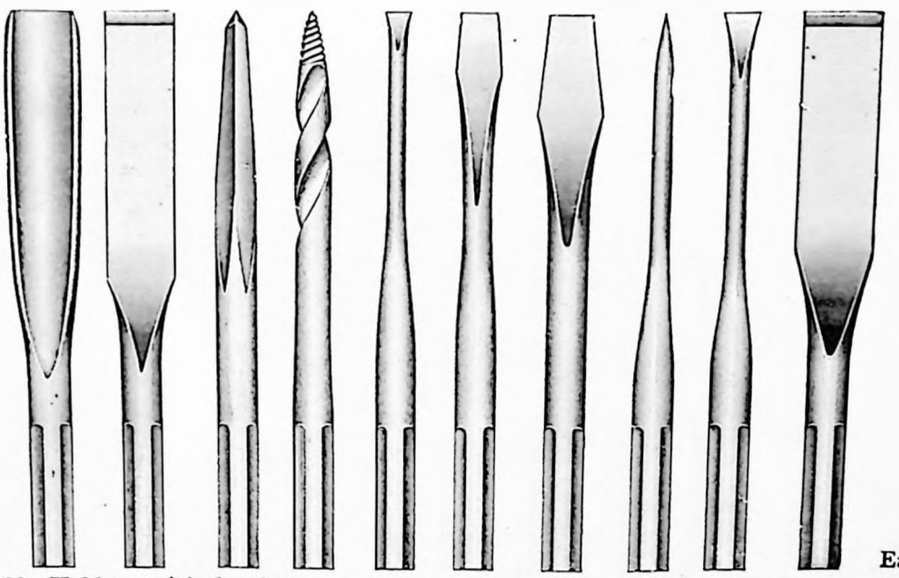


ILLUSTRATION Nos. 20 AND 35

The Chuck has no loose parts or springs to get lost or out of order.
Handles are light, strong and indestructible.
All parts are machined from screw steel.
The screw cap will not crack, split or break.

Full Size Illustrations of Tools in No. 35



	Each
No. 20 Holder, 4⅜ inches long	$1.60
No. 35 Holder, 5¼ inches long	2.00

Henry Pattern

No. 22

Made of Cocobolo, finely polished, with nickel-plated Metal Cap.
Contains twelve tools made of the best Tool Steel, tempered and finished in the most workmanlike manner.
One Chisel, one Screwdriver, one Reamer, one Tack Puller, one Pegging Awl, one Marking Awl, six Brad Awls, assorted.
Four inches in length and can be easily carried in the pocket. Being made of solid wood, it is not liable to split.
The tools stand upright in holes under the metal cap, facilitating selections.

Per dozen $10.15
Each ..... .94

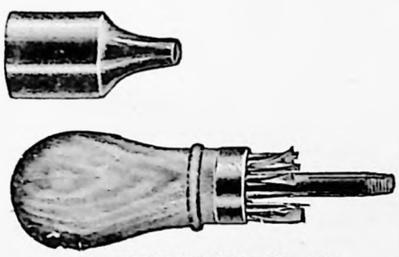
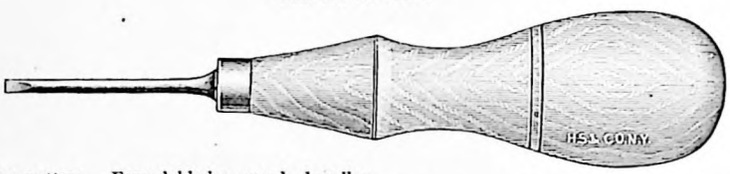


ILLUSTRATION No. 22

Brad Awls

H. S. & Co.



English. Collier pattern. Forged blades, maple handles.

Inches	1	1¼	1½	1¾	2	2½
Per dozen	$0.78	$0.80	$0.98	$1.08	$1.24	$1.50
Each	.08	.08	.10	.11	.12	.15

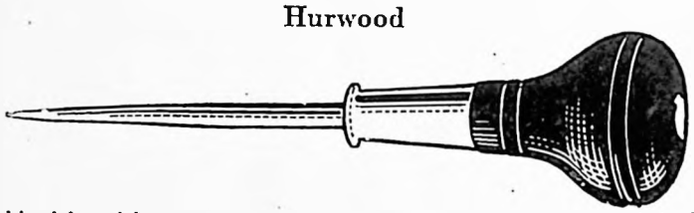
Hurwood

Blade, shank and head formed of one piece of steel. Two patented projecting wings, under the head, together with a rivet which passes through the steel ferrule, handle and shank securely fastens the blade in the handle. The handles are stained black. Points are carefully tempered.

	Per Dozen	Each
No. 17 1, 1¼, 1½ inches, flat point	$3.00	$0.28

Sewing Awls

Hurwood



Blade, shank and head formed from one piece of steel. Handles securely attached to blades by rivet and two projecting wings under head. The handles are stained black and the points are carefully tempered.

	Per Dozen	Each
No. 6 2¾-inch blade, ¼-inch diameter, needle point	$3.00	$0.28
No. 7 3½-inch blade, ¼-inch diameter, needle point	3.24	.30

Sewing Awls

Stewart Speedy Stitcher

A sewing device which feeds the thread from a spool or bobbin in the handle.
Contains two needles (one No. 8 straight and one No. 8 curved) contained in receptacles underneath the ferrule which tightens the needle in chuck. It is suitable for mending harness, shoes, tents, awnings, pulley belts and carpets, saddles, sails, suitcases, rugs, buggy tops, dashboard, or any heavy material. Full direction with each awl.

	Each
Each	$0.72
Extra Needles	$0.07

Machinist Scrapers

H. S. & Co.

ILLUSTRATION No. 6

No. 6 Double End, 10 inches long.
Each $0.80

ILLUSTRATION No. 7

Inches	6	8	9
Each	$0.55	$0.60	$0.65

Three Square, concave, hardwood handle.

ILLUSTRATION No. 3

No. 3 Rosewood handle, 3¼-inch blade. The blade is made of the finest tool steel, ground concave. Will hold a good cutting edge and is easily sharpened. Just the tool for scraping bearings, etc.
Each $0.45

B. & M.

ILLUSTRATION No. 10

Length, inches	7	8	9
Cutting edges, inches	2¾	3½	3¾
Each	$0.51	$0.58	$0.64
Set of three			$1.73

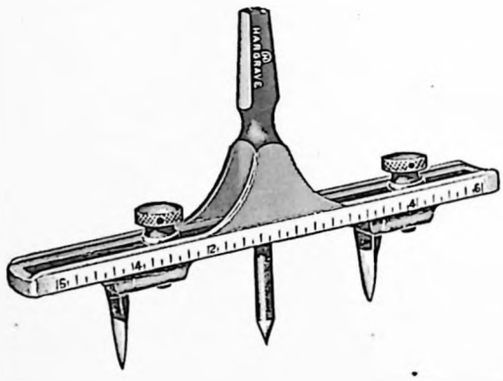
Carbon Scrapers

H. S. & Co.

No. 35 Round red fibre finish handles; polished and blued blades. Three to a set in box..... $0.73

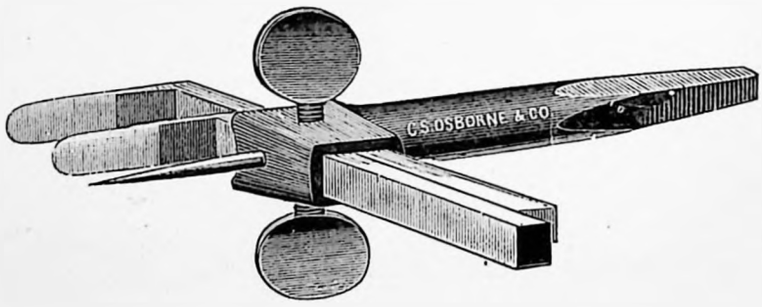
Washer Cutters

H. S. & Co.



For cutting gaskets out of leather, paper, rubber, sheet lead, or thin wood, cutting both inner and outer circle at the same time, and adapted to any ordinary brace. The body of tool is malleable iron, pin of steel, and the blades of the best tool steel, properly ground and tempered. Polished and japanned. The adjustment is made by knurled thumb screw.

No. 407 Cuts up to 6 inches. Each..... $1.66



No. 350 Plain, cuts up to 6 inches. Each..... $1.60

Nail Sets

H. S. & Co.

Extra Fine Quality

Round Knurled

ILLUSTRATION No. 10 POLISHED AND BLUED

3/32, 1/16, 5/32 or 1/8 inch cupped points, 1/16-inch diameter, 4 inches long.

Per dozen $0.86
Each ..... .08

Square Head Knurled

ILLUSTRATION No. 50 POLISHED AND BLUED

Will not roll away. Is hardened on both ends and will not curl up by hammer blows. 1/16-inch diameter, 4 inches long.

3/32, 1/16, 5/32 or 1/8 inch cupped points.

Per dozen $1.52
Each ..... .14

Prick Punches

H. S. & Co.

Extra Fine Quality

Round Knurled

ILLUSTRATION No. 11 POLISHED AND BLUED

Diameter, 1/16 inch, 4 inches long.

Per dozen $1.52
Each ..... .14

Square Head Knurled

ILLUSTRATION No. 22 POLISHED AND BLUED, WILL NOT ROLL

Diameter, 1/16 inch, 4 inches long.

Per dozen $1.62
Each ..... .15

Centre Punches

H. S. & Co.

(Extra Fine Quality)

Round, Knurled

ILLUSTRATION No. 10 POLISHED AND BLUED

Length, inches	4	4	4
Diameter, inch	1/4	5/16	3/8
Per dozen	$1.08	$1.40	$1.62
Each	.10	.13	.15

Square Head, Knurled

ILLUSTRATION No. 20 POLISHED AND BLUED

Length, inches	4	4
Diameter, inch	5/16	3/8
Per dozen	$1.95	$2.27
Each	.18	.21

Machinist, Octagon

ILLUSTRATION No. 020 BLACK

Size, inch	3/8	1/2
Per dozen	$2.59	$4.97
Each	.24	.46

Round Punches

(For Leather, Cardboard, Paper, etc.)

H. S. & Co.

(Extra Fine Quality)

ILLUSTRATION No. 10 CARBON FINISH

Size	1	2	3	4	5	6	7	8
Per dozen	$1.95	$1.95	$1.95	$1.95	$1.95	$1.95	$1.95	$1.95
Each	.18	.18	.18	.18	.18	.18	.18	.18
Size	9	10	11	12	13	14	15	16
Per dozen	$1.95	$2.48	$2.48	$2.48	$3.00	$4.43	$4.43	$4.43
Each	.18	.23	.23	.23	.28	.41	.41	.41

ILLUSTRATION No. 20 FULL POLISHED

Size	0	1	2	3	4	5	6	7	8
Drill gauge, No.		45	42	33	29	23	18	9	1
Each	.45	.34	.34	.34	.34	.34	.34	.39	.39
Size		9	10	11	12	13	14	15	16
Inch		13/64	3/16	11/64	7/32	15/64	1/4	17/64	9/32
Each		.39	.39	.45	.45	.62	.62	.73	.73

 Above prices are subject to change without notice

Pin Punches

H. S. & Co.

(Extra Fine Quality)

Octagon, Light

ILLUSTRATION No. 46A BLUED ENDS

	Per Dozen	Each
Point 1/16 inch, diameter 1/4 inch, 4 3/8 inches overall	$4.32	$0.40

Round, Knurled

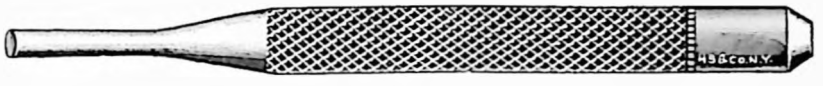
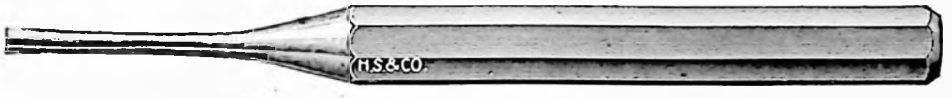


ILLUSTRATION No. 12 BLUED

	Per Dozen	Each
3/32, 1/8, 5/32-inch points, length 4 1/4 inches, diameter 1/8 inch	$1.20	$0.11

Octagon, Heavy

Blued Ends



Size	1	2	3	4	5	6
Diameter of point, inch	1/16	1/16	7/64	1/8	5/32	3/16
Diameter of stock, inch	5/8	1/2	1/2	7/16	7/16	7/16
Length overall, inches	6 1/2	6 1/4	5 7/8	5 7/8	5 1/2	5 3/8
Per dozen	$2.80	$2.15	$2.15	$1.95	$1.95	$1.95
Each	.26	.20	.20	.18	.18	.18

Metal Punches

H. S. & Co.

(Extra Fine Quality)

Solid Octagon

ILLUSTRATION No. 35 BLUED ENDS

Size	0	1	2	3	4	5	6	7	8
Diameter of steel, inch	1/2	7/16	7/16	3/8	3/8	3/8	5/16	5/16	5/16
Length, inches	5	5	4 3/4	4 3/4	4 1/2	4 1/2	4 1/4	4	4
Per dozen	$1.95	$1.84	$1.84	$1.62	$1.62	$1.62	$1.50	$1.50	$1.50
Each	.18	.17	.17	.15	.15	.15	.14	.14	.14

Hollow Round

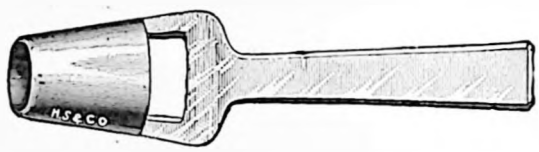
ILLUSTRATION No. 25 BLUED HEAD

Inches	1/2	3/4	7/8	1	1 1/4	1 1/2
Each	$0.75	$0.90	$0.98	$1.08	$1.65	$2.40

Arch Punches

H. S. & Co.

(Extra Fine Quality)



Solid Steel Easy Cutting (For Leather, Cardboard, Paper, etc.)

Sizes 3 inches and under are cut from Solid Bar, not Welded.

No. 5

Size, inches ...	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16
Each	$0.71	$0.71	$0.75	$0.83	$0.83	$0.90	$0.90	$0.98	$0.98	$1.05
Size, inches	1	1 1/8	1 1/4	1 3/8	1 1/2	1 5/8	1 3/4	1 7/8	2	
Each	$1.05	$1.07	$1.65	$1.95	$2.40	$2.60	$2.88	$3.05	$3.50	

Metal Punches

Hand

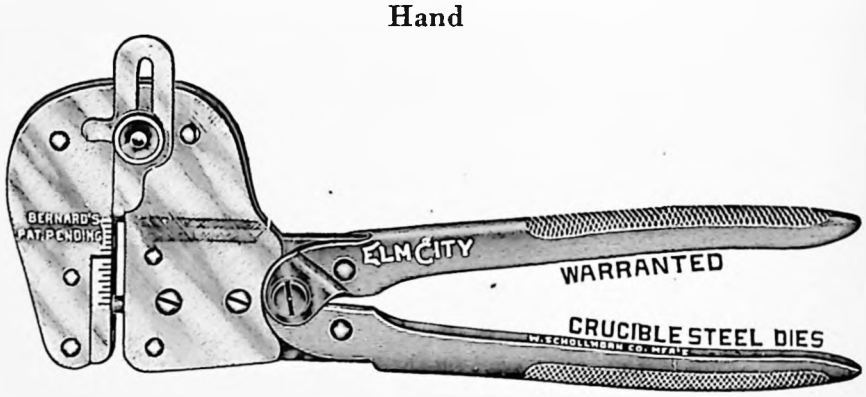


ILLUSTRATION No. 17 ELM CITY

This Punch is made of stamped steel and has polished jaws or head with black handles. Length, 9 inches. The dies work parallel and there is a gauge to set the holes. This punch has 1/8 inch opening between the jaws and will punch a hole 1 inch from edge of metal to center of hole. If the metal is not harder than regular cold-rolled stock, the 1/4-inch dies will punch No. 14 gauge metal, the 3/16-inch dies will punch No. 13 gauge metal, and the 1/8-inch dies No. 10 gauge metal. This punch will be made with 1/16, 1/8, 3/32, 5/32, 3/16, 7/32 or 1/4 inch dies. Packed one tool to a box. Warranted.

Each $3.50

Extra dies (one male and one female die to a set), 5/32-inch dies can be furnished, but are not recommended and not guaranteed.

Per set $0.80

Spring Punches

H. S. & Co.

All Steel Extra fine quality with Steel Screw Tubes

ILLUSTRATION No. 153 POLISHED, 8 INCHES OVERALL

With steel tubes 1 to 7. Each.....$1.20

Revolving, with Side Spring

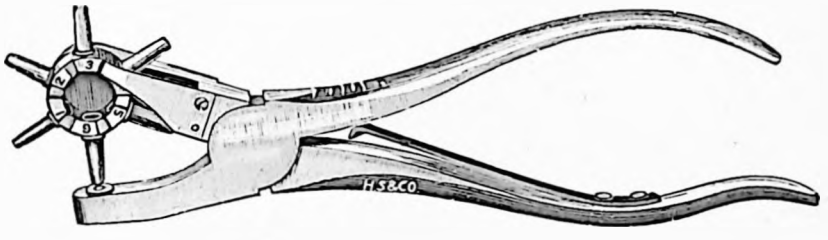
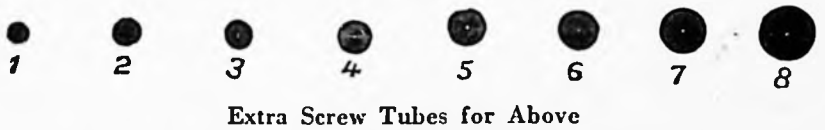


ILLUSTRATION No. 155 POLISHED, 8½ INCHES OVERALL

	Each
With 4 Tubes, Nos. 3 to 6.....	$1.40
With 6 Tubes, Nos. 1 to 6.....	1.65



Extra Screw Tubes for Above

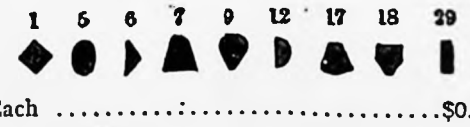
Each $0.30

Ticket Punches

H. S. & Co.

Nickel-plated

Length of frame, 4¼ inches.
Punches card ¾ inch from edge.
A very low-priced punch.
Made only with the following assorted dies:



Each $0.85
Be Sure to State Number of Die Wanted

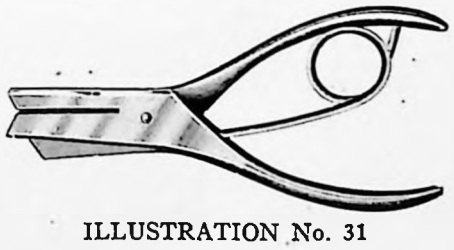


ILLUSTRATION No. 31

Spring Punches

Bernard

With Screw Tubes and Adjustable Gauge. Warranted Crucible Steel

Revolving

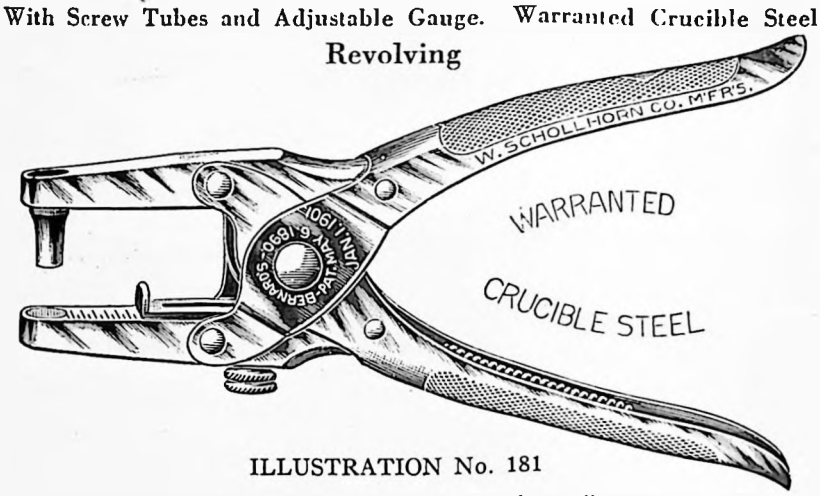


ILLUSTRATION No. 181

Is heavily and strongly made, to take large tubes only; will not take smaller than No. 8, $\frac{7}{32}$ inch. 8 inches overall. With three tubes, Nos. 8 ($\frac{7}{32}$), 9 (8/32) and 10 ($\frac{9}{32}$).

Each $1.50

Extra Parts	Each
Tubes	$0.29
Brass Anvils	.07

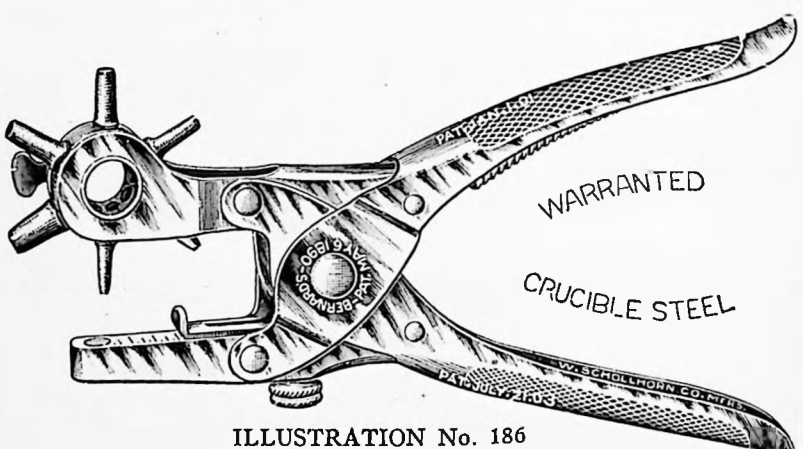
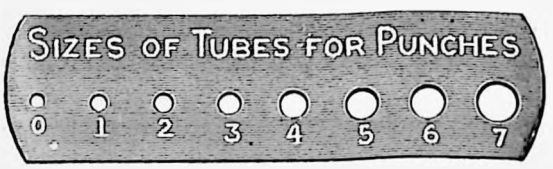


ILLUSTRATION No. 186

Open throat, parallel jaws, full nickel-plated; 8 inches overall. With 6 screw tubes, Nos. 1 to 6.

Each $3.00

Extra Parts	Each
Tubes	$0.23
Brass Anvils	.07
Jaw Springs	.09



Glass Cutters

Genuine "Red Devil"

Finest in the World. Hand-Honed Wheels.

	Per Dozen	Each
No. 024	$1.60	$0.15

H. S. & Co.

The turret contains six high-grade steel wheels, hardened and tempered and carefully tested.
The turret may be revolved on or clamped to the frame by the screw, the head of which appears on the reverse side of the tool from that shown in the cut.
This screw is slotted so that it may be operated by a screwdriver, thus enabling any of the cutters to be placed in position for use instantly.
The turret is held within a circular recess, which protects all of the cutters not in a position for use. When desired, the turret may be removed, and new cutters inserted instantly and with ease. The axles are permanently secured to prevent their falling out while new wheels are being inserted.
No. 10 Rosewood finish handle, nickeled ferrule. Cutter head and revolving turret of steel, highly polished and nickeled.

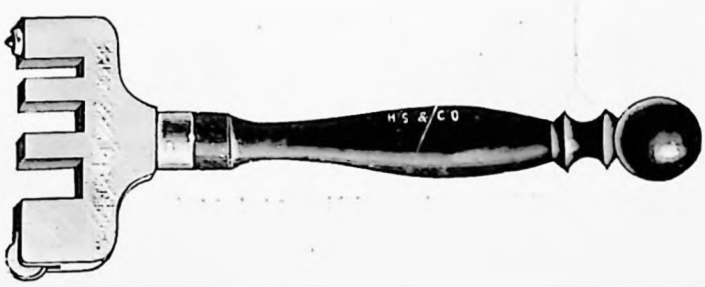
Per dozen $2.27
Each ..... .21

Glaziers' Diamonds

(Not Guaranteed)

All Glaziers' Diamonds listed on this page have been carefully selected and tested and are of the best quality. The diamonds can be reset at least three times.
To obtain the proper cut, hold the diamond as slanting as possible, raising it gradually until a smooth, sound and clear cut is made. Do not hold it perpendicularly—any diamond can be spoiled in one attempt to cut glass by being held this way. Never try to cut twice in the same place.

No. 1 Extra tulip key. For general use on ordinary glass. Each..... $5.00



Anyone can cut with this style, however inexperienced in glass-cutting, as it merely requires to be set on the glass and drawn over it to make a perfect cut.

No. 5 Sure-cut. Each $5.35

Eyeglasses

Watchmakers

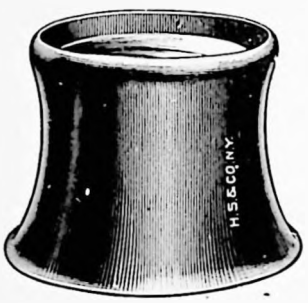


ILLUSTRATION No. 144-2

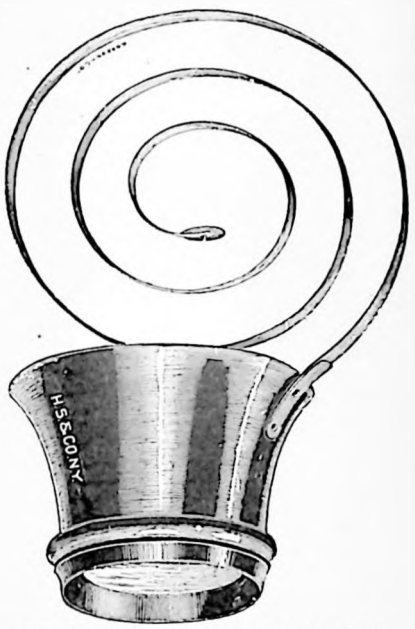


ILLUSTRATION No. 144-2 LP

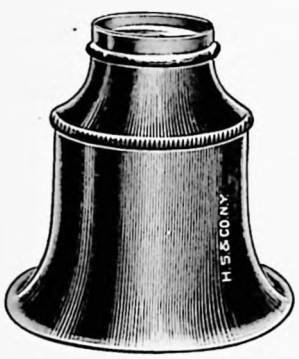


ILLUSTRATION No. 144A

Nos.	Diameter of Lens Inch	Focus Inches	Each
144-2	1	2 to 3	$1.05
144-A	½ and 1	1½ to 2½	1.50
144-2 LP	1	2 to 3	1.50

Engravers

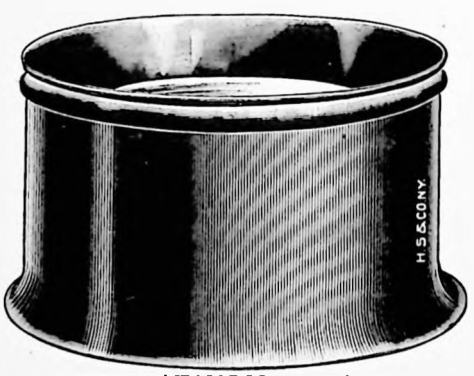


ILLUSTRATION Nos. 146A-148A

Nos.	Diameter of Lens, Inches	Each
146A	1⅝	$4.35
148A	2⅛	4.35

Above prices are subject to change without notice

Tweezers

H. S. & Co.

Printers', with Coarse Serrated Flat Points

No. 291 3½ inches, Nickel-plated.
Per dozen $3.90
Each ..... .36

Same with Shim and Back Pin Length, 4 inches

No. 340 Nickel-plated.
Per dozen $9.07
Each ..... .84

Printers', with Bodkin

No. 350 4 inches, Nickel-plated, with movable bodkin, extra quality.
Each $1.15

Piano

		Per dozen	Each
No. 57B	5 inches	$1.40	$0.13
No. 57D	5½ inches	1.85	.17
No. 57C	6 inches	2.15	.20

Piano

		Each
No. 56	6 inches.....	$0.65
No. 57	7 inches.....	.70
No. 75A	8 inches.....	.75

Jewelers'

No. 15 4¼ inches, Nickel-plated.
Per dozen $2.70
Each ..... .25

Jewelers'

No. 240 4¾ inches, Nickel-plated, with curved points.
Per dozen $11.55
Each 1.07
Straight.
Per dozen $10.35
Each ..... .96

Jewelers'

No. 18 4½ inches, Nickel-plated.
Per dozen $3.02
Each ..... .28
No. 40 4½ inches, Polished.
Per dozen $2.05
Each ..... .19

Flower Makers'

4¼ inches long, 5½ inches overall.

No. 180	Per Dozen	Each
Nickel-plated	$2.70	$0.25
Plain	2.05	.19

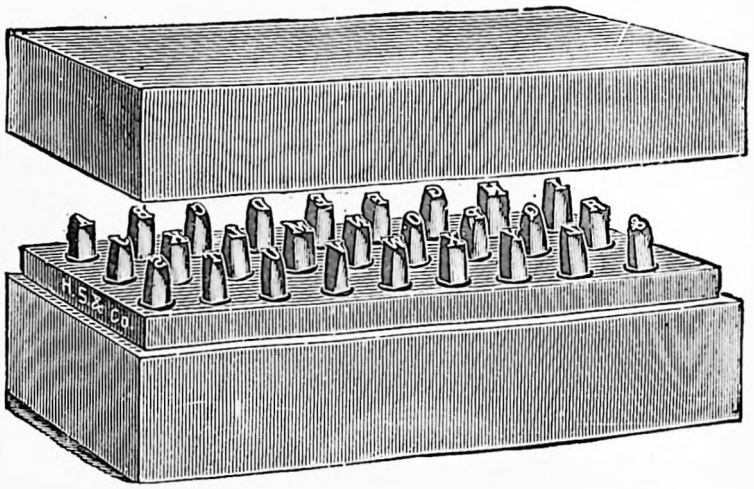
Hand-Cut Steel Stamps

H. S. & Co.

Extra Fine Quality

They are hand-cut from Jessop Tool Steel and are fully guaranteed.

In Sets



Letters, in Sets of 27

Size of letters, inch	3/32	1/16	3/32	1/8	5/32	3/16
Per set of 27 letters	$11.25	$7.90	$7.90	$7.90	$9.40	$10.15
Size of letters, inch	1/4	5/16	3/8	7/16	1/2	
Per set of 27 letters	$12.40	$14.60	$18.00	$20.25	$24.75	

Figures, in Sets of 9

(Reverse 6 to make 9)

Size of figures, inch	3/32	1/16	3/32	1/8	5/32	3/16
Per set of 9 figures	$3.75	$2.65	$2.65	$2.65	$3.00	$3.38
Size of figures, inch	1/4	5/16	3/8	7/16	1/2	
Per set of 9 figures	$4.13	$4.88	$6.00	$6.75	$8.25	

Mason and Chalk Lines

H. S. & Co.

		Each
No. 5	Braided, 84-foot hanks	$0.18
No. 10½	Cotton, heavy, 20-foot hanks	.08
No. 24	Mason linen, white, twisted, in ½-pound balls	.36

		10 Lbs.	Less
No. 27	Mason cotton, 1-pound hanks, about 600 feet to pound	$0.60	$0.67
No. 36	Mason cotton, 1-pound hanks, about 450 feet to pound	.60	.67

Carpenters' Chalk

		Per Dozen		
Red	In half-spheres	$0.20	2 for	$0.05
White	In half-spheres	.17	3 for	.05
Blue	In half-spheres	.20	2 for	.05

White Chalk Crayons

H. S. & Co.

For School Use	Per Gross	Per Dozen
1 gross in a box	$0.35	$0.05

Metal Workers' Crayon

H. S. & Co.

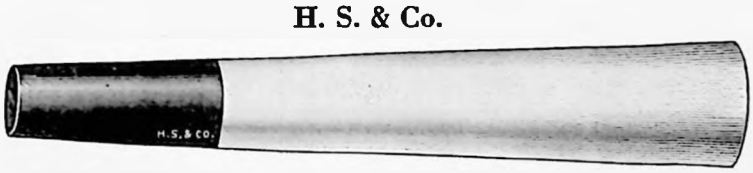
Soapstone

These are made from selected soapstone (or talc) and the marks made with them will not disappear when used on iron and heated.

	Per Gross	Per Dozen	
¼-inch square, 5 inches long	$1.62	$0.15	2 for 5c
No. 524 ⅛ x ½ x 5 inches	3.00	.28	2 for 5c

Marking Crayons

H. S. & Co.



No. 101

	Per Gross	Per Dozen	Each
Black, 5 inches long. For all marking purposes. Will not smut, blur or wash off	$4.40	$0.40	$0.05

Checking Crayons

H. S. & Co.

		Per Gross	Per Dozen	Each
No. 102	Black, 6½ inches long. Will not smut, blur or wash off..	$2.70	$0.25	2 for 5c

Lumber Pencils

H. S. & Co.

		Per Gross	Per Dozen	Each
No. 361	Black, 4¾ inches long, ½-inch diameter.....	$5.40	$0.50	$0.05
No. 520	Red, 4¾ inches long, ½-inch diameter.....	9.72	.90	.09
No. 521	Blue, 4¾ inches long, ½-inch diameter.....	9.72	.90	.09
No. 496	Yellow, 4¾ inches long, ½-inch diameter.....	9.72	.90	.09

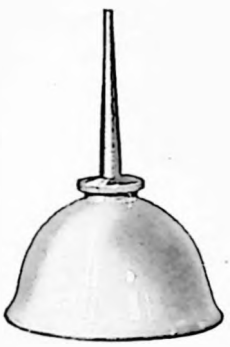
Carpenter or Framer Pencils

Faber

		Per Dozen	Each
No. 777	Octagon Shape Plumb Line, yellow polish, 7-inch. Special fine quality	$0.35	$0.05
No. 727	Oval, plain cedar, 7-inch.....	.40	.05
No. 729	Oval, plain cedar, 9-inch.....	.47	.05

Oilers

Gem



Made of No. 20 B. & S. Gauge Cold Rolled Steel, Highly Polished, Tempered Steel Bottoms, Bushings Brass Castings Machine Cut.

Nos.	Capacity	Spout, Ins.	Diam., Ins.	Per Doz.	Each
1603	⅓ Pt.	3	3⅜	$3.67	$0.34
1704	½ Pt.	4	3¾	4.64	.43
1706	½ Pt.	6	3¾	4.97	.46
1806	¾ Pt.	6	4⅛	5.72	.53
1809	¾ Pt.	9	4⅛	6.15	.57
1904	1 Pt.	4	4½	6.15	.57
1906	1 Pt.	6	4½	6.48	.60
1909	1 Pt.	9	4½	6.90	.64

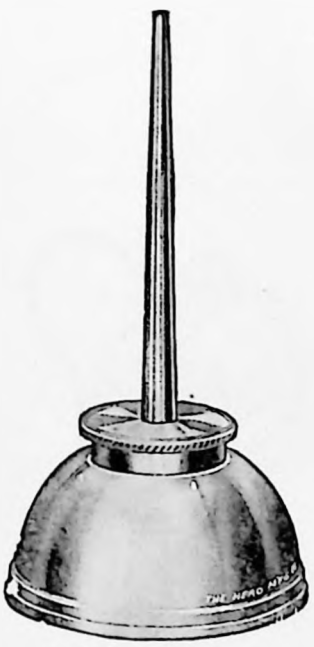
6 and 9 inch spouts are furnished bent unless otherwise ordered.

Plain Brazed Steel

Made of No. 20 B. & S. Gauge Brass Sheet, Highly Polished and Lacquered, Tempered Steel Bottoms, Bushings Brass Castings Machine Cut. All parts interchangeable.

Nos.	Capacity	Spout, Ins.	Diam., Ins.	Per Doz.	Each
1603B	⅓ Pt.	3	3⅜	$6.15	$0.57
1704B	½ Pt.	4	3¾	7.15	.66
1706B	½ Pt.	6	3¾	7.45	.69
1806B	¾ Pt.	6	4⅛	8.32	.77
1809B	¾ Pt.	9	4⅛	9.07	.84
1904B	1 Pt.	4	4½	8.65	.80
1906B	1 Pt.	6	4½	9.07	.84
1909B	1 Pt.	9	4½	9.72	.90

6 and 9 inch spouts are furnished bent unless otherwise ordered.



With Straight Spout

Bent Spout

H. S. & Co.

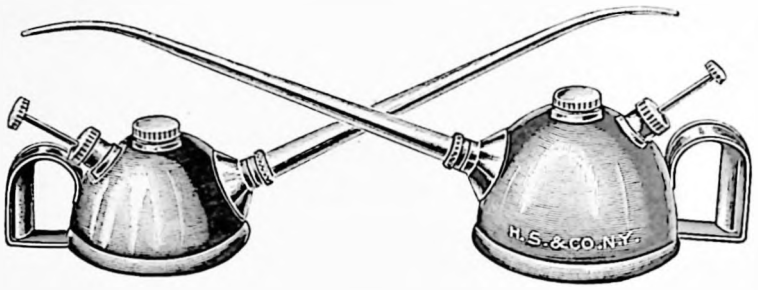
Drawn steel, heavily copper plated, tempered spring steel bottoms.

Steel

Nos.	Capacity, Ozs.	Spout, Ins.	Diam., Ins.	Per Dozen	Each
12	2½	2½	2¾	$1.40	$0.13
13	4½	3	3½	1.73	.16
13A	4½	5	3½	1.95	.18
14	4½	9 Bent	3½	2.05	.19
14A	9	3	3⅞	2.38	.22
14AA	9	5	3⅞	2.48	.23
14B	9	9 Bent	3⅞	2.70	.25
15	13½	3	4⅜	2.92	.27
15A	13½	5	4⅜	3.00	.28
16	13½	9 Bent	4⅜	3.24	.30

Pump Oilers

Auto



Drawn in one piece

These Oilers are especially adapted for automobiles, motor boats, stationary engines, etc. They form part of the equipment of some of the finest automobiles manufactured, both at home and abroad.

		Each
No. 802	½ pint, 3¾-inch diameter, 9-inch spout	$1.00
No. 804	1 pint, 4¼-inch diameter, 9-inch spout	1.05

Engineers' Fillers

H. S. & Co.

Diameter of bottom, inches	4⅜	5¼	6
Height of body, inches	3¼	4¾	5¾
Length of spout, inches	4½	7	7
Capacity	1 pt.	1 qt.	2 qts.
Copper Plate			
Nos.	19	210	211
Per dozen	$7.35	$10.58	$12.65
Each	.68	.98	1.17
Brass			
No.			190
Per dozen			$14.25
Each			1.32

Drawn Seamless Bodies

 Above prices are subject to change without notice

Oilers

H. S. & Co.

Sewing Machine

ILLUSTRATION No. 10059

Zinc

No.	559
Diam., inches	2 1/16
Height of body, inches	1 1/8
Length of spout, inches	2 1/8
Capacity, fluid ozs.	1
Per dozen	$0.65
Each	.06

Pocket

No. 968 Nickel-plated cap is fitted with needle and cork attachment, preventing stoppage of tip and leakage. 3¼ inches overall when closed.

Per dozen $1.08
Each ..... .10

Phonograph

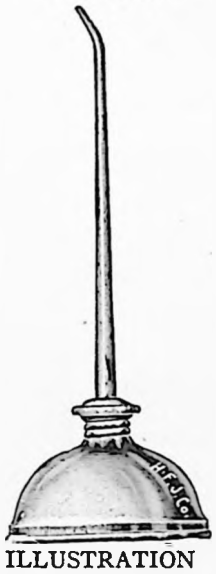


ILLUSTRATION No. 562

Made of Zinc, Nickel-plated

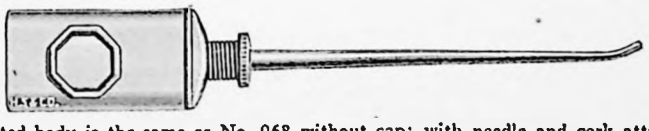
Nos.	562
Diameter of bottom, inches	1 7/8
Height of body, inches	1¼
Length of spout, inches	3 7/8
Capacity, fluid ounces	½
Per dozen	$0.84
Each	.08

C and D

For Bicycles, Guns, Fishing Tackle, Typewriters, Sewing Machines, Roller Skates, etc.

Consists of tube, tip and cap. The tip throws only a few drops at a time, thereby avoiding loss.

Per dozen $2.70
Each ..... .25



No. 969 Nickel-plated body is the same as No. 968 without cap; with needle and cork attachment, and with curved spout 4 inches long, making it 6¼ inches overall.

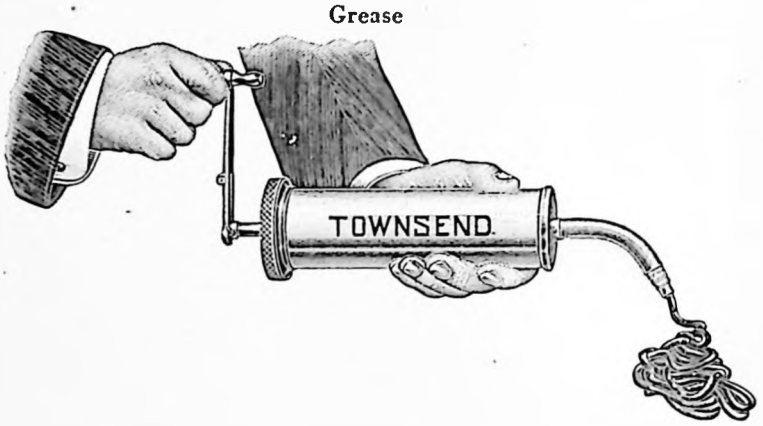
Per dozen $1.84
Each ..... .17

Oil and Grease Guns

(Handy Devices for Unhandy Places)

Townsend

Grease



This Gun is made of two brass tubes, each .04 inch thick, and secured with cap and funnel at opposite ends. Spout is brass tubing ⅝ inch diameter, and nozzle is turned from solid brass rod; together they are 5 inches long. Nozzle has $\frac{1}{16}$ inch hole. Extra length of spout or any size nozzle at special prices. Quickly and completely filled from large opening in the side, with steel paddle supplied with each gun. Has quadruple screw with crank handle, which will discharge a pound of grease exactly where wanted in 15 seconds.

	Each
8 ounces, 7⅜x2 inches	$3.50
12 ounces, 8⅛x2¼ inches	4.00
16 ounces, 8¾x2½ inches	5.00

Copley

(Leather Packed)

Oil

	Each
5 ounces, 8x1¼ inches	$1.90
8 ounces, 12x1¼ inches	2.30
12 ounces, 14x1½ inches	3.00
18 ounces, 16x1¾ inches	3.80
30 ounces, 18x2¼ inches	4.95

For handling oil lubricants only (not gasoline). Recommended where a lower priced gun is desired. Piston Packings are of specially selected leather and will give long service. Body is seamless brass tubing, polished and lacquered, with piston rods of Bessemer steel. The larger sizes have wooden handles, 4-inch tapered tip with each gun.

Oil, Grease and Gasoline

Boston Combination

Will handle with equal facility gasoline, light or heavy oil, non-fluid oil or the heaviest grease.

For oils or light greases it is used like an ordinary oil gun. For handling heavy greases, screw lock-nut down firmly, then turn handle forward on the heavy square screw thread, forcing grease out in ribbon, which will quickly pack gear case or transmission. Polished and lacquered brass.

6 ounces, 6x1¼ inches $3.00

Above prices are subject to change without notice

Cleaning and Priming Can

Adaptable for Starting Motors, Cleaning Machinery, etc., as well as for Printers' Use.

McNutt Non-Explosive

Made from drawn steel, copper-plated; enameled red. Very strong and durable.

Capacity	Each
1 quart, brass	$2.00
½ pint, steel	.90
1 pint, steel	1.12
1 quart, steel	1.60

Priming

Success, Safety

Made of heavy brass; stoppers turned from solid brass. No vapor or fluid can escape, excepting by pressure on the circular plate below the nozzle—when this pressure is released the stopper automatically and instantly closes.

Capacity	Each
1 pint	$1.75
1 quart	2.10

Oil Storage Tanks

Perfection with Pump

For Miscellaneous Oils
With Corrugated Bodies and Bottoms

Have Steady Stream Pumps, which can be detached and used in pumping oil from barrel into the tank. Each tank furnished with a 1-pint, 1-quart and 2-quart tin measure, and a 1-quart tin funnel.

Capacity	Each
30 gallons	$8.40
60 gallons	10.15

Gasoline, Benzine and Oil Cans

McNutt Non-Explosive

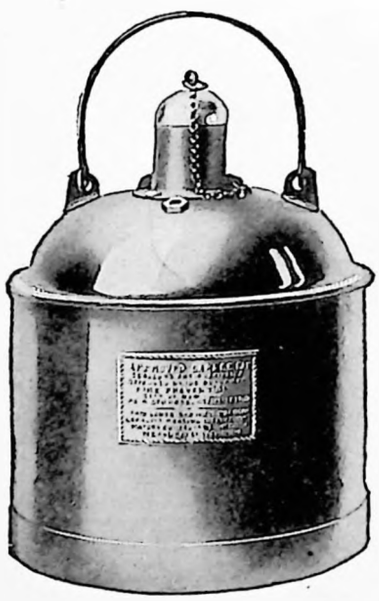
These cans remove all element of danger, as actual contact with fire will not cause an explosion. Approved by Fire Departments and Underwriters.

Eclipse

Drawn from one piece of steel, enameled red with self-closing device. Used by tailors, cutters and for general domestic use.

Capacity	Each
1 gallon	$2.80
2 gallons	3.00
3 gallons	3.40

Universal Plug Closure



Made of heavy galvanized iron, double seam, with self-closing device. Empties rapidly and very durable. Painted red.

Capacity	Each
5 gallons	$6.00

Red Crown

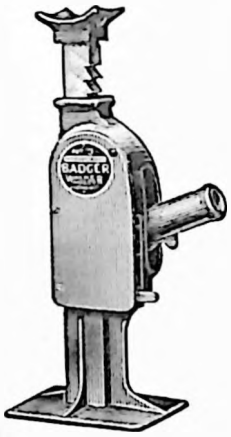
This can is constructed from heavy galvanized iron, double seam and has self-closing device. Large opening. Hangs well on pump. Painted red.

Capacity	Each
5 gallons	$6.00

Above prices are subject to change without notice

Automobile Jacks

Badger



No. 3

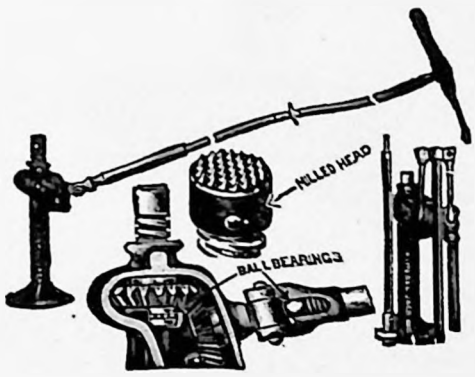
Made of malleable iron and best carbon steel. Standard, well-ribbed, broad base. Strong, durable pawls of high carbon tool steel, drop forged positive reverse; rise is very rapid and only short stroke of handle is required. Best workmanship throughout. Blue finish.

Nos.	1	3	6	5	55
Capacity, tons	¾	1	1	3	5
Height, inches	10	11	11	11½	14½
Rise, inches	5	6	6	5½	6¾
Each	$3.00	$3.80	$4.70	$7.00	$15.00

Kimball

Eliminates crawling under car. Long handle permits lifting any car. Diamond point hardened steel top holds anywhere on any bolt or spring. Handle folds up to same size as jack. Any size can be used on all sizes of car. Ball bearing.

Nos.	1	3	4
Minimum Height, inches	9	11	12
Extended Height, inches	15	18	20
Each	$6.00	$6.00	$6.00

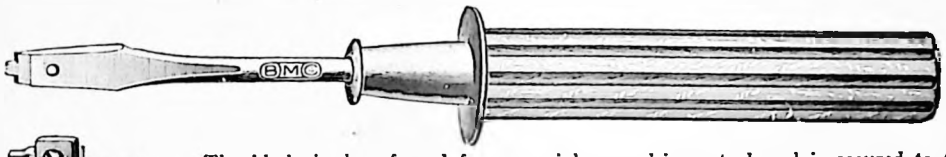


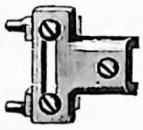
Kimball Jack

Automobile Tools

Valve Grinder

B. M. Co.





The blade is drop-forged from special screwdriver steel and is secured to the handle by a patented locking device. The adjustable attachment is used when grinding valves that have grip holes in the head of valve stem instead of a slot, and is adjustable from ⅛ to 1¼ inch. In operating, the handle is rolled back and forth between the palms, the broad steel flange affording a slight downward pressure in addition to preventing the hands from slipping.

Tool, complete. Each.....$1.45
Without attachment. Each..... 1.00

Wheel and Gear Pullers

For removing auto wheels, fly wheels, transmission and cam-shaft gears, commutators, sprockets, collars, pulleys, couplings, etc. Their use eliminates the danger of serious damage from using a hammer and chisel.

Crane

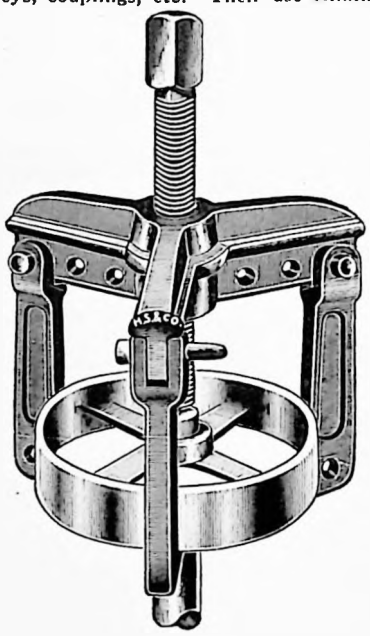


ILLUSTRATION No. 3

Three Arm Puller

Pulling from three points will remove collars and work that cannot be started with the two arm puller.

ILLUSTRATION No. 2

Two Arm Puller

Removing work near end of shaft.

Description

Both No. 2 and No. 3 Pullers are made in 2 and 3 Arm styles.

No. 2 Puller—Beam, 5 inches radius. Combination arms are 6 inches from center to center of holes. Reaches work 11 inches from end of shaft and 16 inches in diameter. Stands a strain of six tons. This size is particularly adapted for the average garage and repair shop.

Prices, with 2 sets combination and hook extension arms. Each
Two Arm Style, weight 17 pounds.....$9.35
Three Arm Style, weight 41 pounds.....12.75

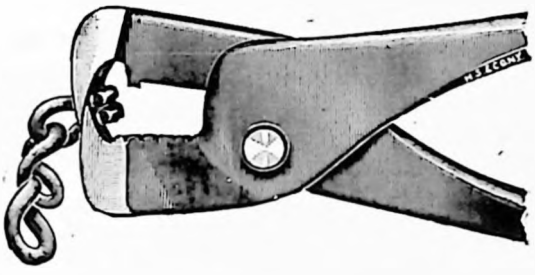
No. 3 Puller—Beam 7 inch radius. Combination arms are 7 inches from center to center of holes. Reaches work 13 inches from end of shaft and 20 inches in diameter. Stands a strain of ten tons. This size will meet the requirements of work of all kinds.

Prices, with 2 sets combination and hook extension arms. Each
Two Arm Style, weight 28 pounds.....$11.05
Three Arm Style, weight 41 pounds..... 15.30

Automobile Tools

Tire Chain Repair Tools

The Necessity

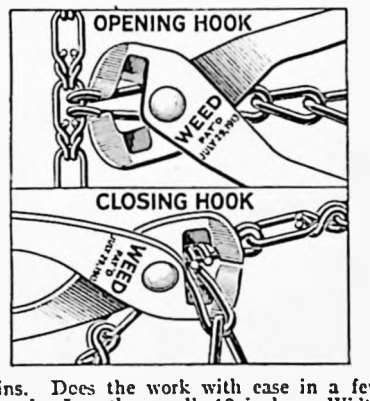


It is made from best steel drop-forgings, milled accurately, fitted and tempered to withstand the roughest use. Net weight 14 ounces.
Guarantee: We will replace, free of charge, any tool broken through fault of material or workmanship, when used for the purpose for which it is designed, of opening and closing cross chains.

Each $1.20

Weed Pliers

For Weed Cross Chains



For repairing or replacing cross chains. Does the work with ease in a few minutes without removing chain from tire. Made of heavy stamped steel. Length overall, 10 inches. Width, when closed, 1¾ inches. Jaws, plain finish; handles, enameled.

Each $0.65

Tire Tool or Pry Bar

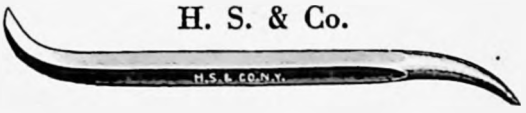
Drop Forged. Accurately Tempered. Nicely Finished. Absolutely Guaranteed

The handiest kind of a tool for taking off and putting on automobile tires quickly. 13½ inches long. 1 inch, tapering to 7/8 inch in width. ½ inch, tapering to a curved and round point, tapered to 1/8 inch thick.

	Per Dozen	Each
No. 620	$9.72	$0.90

Cotter Pin Extractor

H. S. & Co.



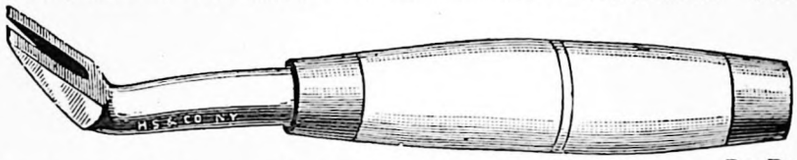
Made of Tool Steel

Polished, 7-inch. Each $0.30

Tack Claws

H. S. & Co.

	Per Dozen	Each
No. 122 Steel Claw, black hardwood handle	$4.35	$0.40



	Per Dozen	Each
No. 123½ Extra heavy Steel Claw, maple handle, iron-bound ends	$12.95	$1.20

Tool Racks

H. S. & Co.

Steel Brass Plated

Below illustrations are full size.

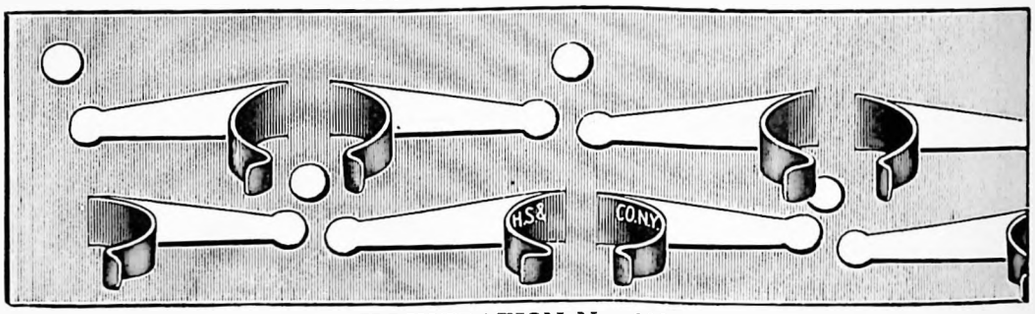
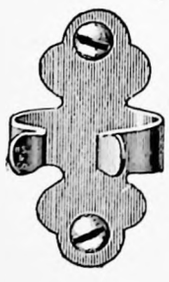
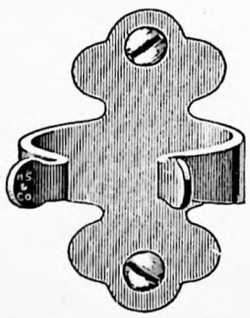


ILLUSTRATION No. 230

Nos.	230	231	232
Width of clasp inside, inches	5/8	7/8	1 1/4
In two-foot lengths. Per dozen	$2.70	$2.65	$3.85
Each	.27	.27	.39





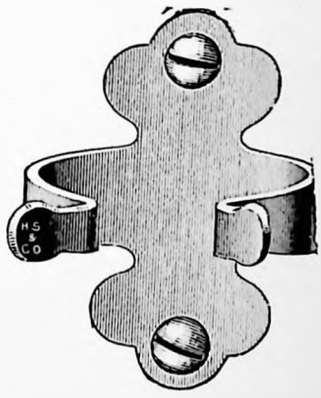


ILLUSTRATION No. 235 ILLUSTRATION No. 236 ILLUSTRATION No. 237

Nos.	235	236	237
Width of clasp inside, inches	5/8	7/8	1 1/8
Per dozen	$0.32	$0.43	$0.58
Each	.05	.05	.06

Flint Paper

Troy

Highest quality paper with high grade glue and sifted quartz coating. Carefully gauged. Size sheets, 9 x 11 inches.

Nos.	Per Ream	Per Quire	Per Dozen	
4/0 to 0	$5.13	$0.28	$0.15	2 for 5c
½	5.43	.30	.16	2 for 5c
1	6.16	.34	.18	2 for 5c
1½	7.18	.40	.22	3 for 10c
2	8.31	.46	.25	3 for 10c
2½	9.54	.53	.29	3 for 10c
3	10.82	.60	.33	3 for 10c

Flint Finishing Paper

Troy

Used on fine surfaces and rubbing down purposes; made on thin paper with a light smooth coating. Size sheet, 9 x 11 inches. Double faced, 240 sheets.

Nos. 5/0, 4/0, 3/0, 2/0, 0.

Per Ream	Per Quire	Per Dozen	
$5.60	$0.32	$0.18	2 for 5c.

Flint Paper

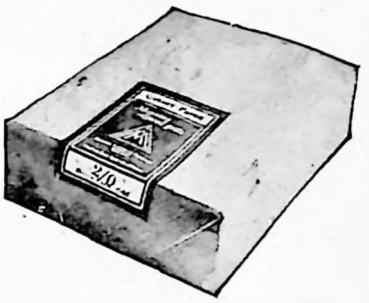
In Handy Packages

Twenty sheets in a package, assorted grades—fine, medium, coarse. Size sheets, 4½ x 5½ inches.

Per package $0.10

Garnet Paper

Troy



The best abrasive for putting a right finish on woodwork—doors, floors, table tops, etc. Fast cutting and durable, it is in great demand by woodworkers in general. Size sheets, 9 x 11 inches.

Nos.	Per Ream	Per Quire	Per Dozen	Per Sheet
4/0 to 0	$7.92	$0.51	$0.28	$0.05
½	10.16	.59	.33	.05
1	12.00	.69	.38	.05
1½	14.00	.81	.45	.05
2	16.32	.96	.53	.05
2½	18.88	1.09	.60	.06
3	21.04	1.21	.66	.06

Emery Paper

Troy

An imported product, ground and graded carefully, making it the best emery abrasive for flat surfaces. Every sheet thoroughly tested before leaving factory.

Nos.	Per Ream	Per Quire	Per Dozen	Per Sheet
2/0 to 0	$8.00	$0.46	$0.25	$0.05
½	8.64	.50	.27	.05
1	9.52	.55	.30	.05
1½	10.88	.63	.35	.05
2	12.56	.72	.40	.05

Emery Cloth

Troy

The best emery for abrasive use is obtained from the Turkish Island of Naxos. Imported in the form of emery rocks, it is ground, graded and backed on flexible cloth, producing an abrasive cloth unequalled for polishing and finishing purposes. Every sheet thoroughly tested and guaranteed perfect.

	Per Ream	Per Quire	Per Dozen	Per Sheet
Crocus Nos.	$27.00	$1.54	$0.85	$0.08
3/0	27.00	1.54	.85	.08
2/0	27.00	1.54	.85	.08
0	27.00	1.54	.85	.08
100	27.00	1.54	.85	.08
½	28.08	1.59	.88	.08
1	29.48	1.68	.92	.09
1½	30.87	1.76	.96	.09
2	32.85	1.87	1.02	.09
2½	35.46	2.02	1.11	.10
3	38.25	2.18	1.19	.11

Blue Back Paper

Known also as Jeweller's paper. A soft, pliable blue paper backing covered with the very smoothest of fine emery. Sheets 9 x 13¾ inches.

Nos.	Per 100 Sheets	Per 12 Sheets	Per Sheet
3/0, 2/0, 0, 1....	$1.95	$0.28	$0.05

Metalite Cloth

Troy

As its name implies, this abrasive material is intended primarily for metal finishing work. It is made from artificial abrasive —products of the high-temperature electric furnace.

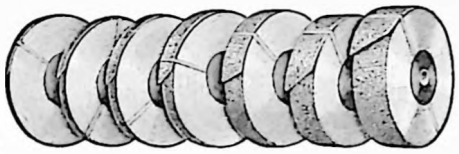
Under many of the conditions encountered in shop work, "Metalite" has been found to give better results than emery. On hard and tough metals particularly, it exhibits unusual endurance and cool cutting qualities.

This cloth is specially treated so as to be very flexible—a most important feature. In sheets, 9 x 11 inches.

Nos.	Per Ream	Per Quire	Per Dozen	Each
3/0 to 0	$30.00	$1.72	$0.95	$0.08
100	30.00	1.72	.95	.08
½	31.20	1.80	.99	.09
1	32.75	1.88	1.03	.09
1½	34.30	1.97	1.08	.10
2	36.50	2.10	1.15	.11
2½	39.40	2.26	1.24	.11
3	42.50	2.44	1.34	.12
3½	46.00	2.64	1.45	.13

 Above prices are subject to change without notice

Metalite Cloth in Rolls



Put up in handy, economical rolls of 50 yards in length, wound on spools.
This method of supplying Metalite Cloth is extremely economical in shop use, eliminating considerable waste. The rolls are supplied in widths ¼ to 3 inches and grits Numbers 3/0 to 3, each roll containing 50 yards. They are wound on spools with metal hub, and an assortment of different widths and grits can easily be mounted on a rod or rack convenient to the bench. When required, just the proper length is cut off, with the result that none is wasted and the balance of the roll is not lost or misplaced.

Per Roll of 50 Yards

Width, Inches	No. 000	No. 00	No. 0	No. 100	No. ½	No. 1	No. 1½	No. 2	No. 2½	No. 3
¼	...	...	...	...	$1.25	...	...	...	...	...
½	...	$1.20	$1.20	...	1.25	$1.30	$1.35	...	...	...
¾	$1.55	1.55	1.55	$1.55	1.60	1.65	1.75	...	...	...
1	1.85	1.85	1.85	1.85	1.90	2.00	2.15	$2.25	$2.35	$2.50
1½	2.50	2.50	2.50	2.50	2.60	2.75	2.90	3.05	3.25	3.45
2	3.10	3.10	3.10	3.10	3.25	3.40	3.65	3.85	4.15	4.45
2½	3.75	3.75	3.75	3.75	3.90	4.15	4.40	4.70	5.00	5.40
3	4.10	...	...	...	...	4.55	4.90	...	5.50	...

Sandpaper Corks

Size, Inches	1⅛ x 3 x 4	1½ x 4 x 6	1½ x 4 x 12
Per Dozen	$2.38	$4.86	$10.00
Each	.22	.45	.93

Steel Wool and Shavings

Are masses of sharp cut steel fiber; being soft and pliable, will reach every corner and crevice; is rapid in action and will not clog or gum.
In packages containing 1 pound net.

Steel Wool

		One-Lb. Package
No. 00	For very high finish and fine work, particularly adapted for rubbing down piano cases	$1.00
No. 0	Substitute for pumice stone, etc., in rubbing down successive coats of varnish, etc.	.73
No. 1	Equivalent of sandpaper No. 0	.53
No. 2	Equivalent of sandpaper Nos. ½ and 1	.45
No. 3	Equivalent of sandpaper Nos. 1½ and 2	.33
		Each
Also Nos. 0, 1, 2, 3 and in small papers		$0.10

Steel Shavings

	One-Lb. Package
"Medium," coarser than fine shavings	$0.33

Shark Skin

Used quite extensively by wood carvers in place of sandpaper.
Per skin $4.50

Cements

Ambroid

A liquid, waterproof cement used for cementing wood, leather, canvas, fabrics, crockery, holes in tin or agate ware. Can also be used for mending gasoline, oil or water pipes, boots, shoes, etc.

	Per Dozen	Each
Trial size	$1.62	$0.15
Household size	2.70	.25
Standard size	5.40	.50

Ever Ready

Always ready for use, no heating being necessary. Will not harden or deteriorate in container. Mends glass, china, metal, marble, wood, rubber, ivory, leather, jewelry, papier-mache, etc., and, after drying, will stand any temperature. Is not affected by water.

	Per Dozen	Each
In small tubes	$1.00	$0.10
In half-pint cans	....	.50
In pint cans	....	1.00

Smooth-On

A prepared chemical compound that withstands fire, water, gasoline, steam or oil; when hard it becomes a metallic iron, expanding and contracting with the iron to which it is applied; will repair cracked water jackets, leaking radiators, screw thread joints, pumps, exhaust pipes, mufflers, etc. Applied as a putty to cold metal.

No. 1 is Quick Hardening; No. 2 Slow Hardening and Hydraulic

Made in powder form for repairing leaks or breaks in castings and for making connections in steam or hydraulic work; withstands fire, water, steam or petroleum and very high pressures. Must be applied as paste or putty to cold metal.

No. 4, Fine Grained, for Foundry Work

In powder form, suitable for repairing blemishes, blowholes or defects in fine-grained iron or steel castings. Applied as a putty to cold metal.

		Per Dozen	Each	Per Pound
No. 1	Household size	$2.40	$0.30	....
No. 1	In one or five-pound cans	....	.....	$0.45
No. 2	In one-pound cans	....	.....	.45
No. 4	In one-pound cans	....	.....	.45

Glue Pots

H. S. & Co.

Water-Jacketed

Cast-Iron Inside Pot, Tinned Inside

Number.....	000	00	0	1	2	3	4	5	6
Capacity, pints	¾	1	1¼	2	2½	3	3½	4½	5
Complete—									
Per dozen.....	$9.30	$10.25	$11.35	$12.65	$15.65	$19.22	$23.22	$27.32	$31.85
Each	.86	.95	1.05	1.17	1.45	1.78	2.15	2.53	2.95
Inside pots only—									
Per dozen.....	$4.65	$5.18	$5.62	$6.25	$7.88	$9.72	$11.65	$13.60	$15.88
Each	.43	.48	.52	.58	.73	.90	1.08	1.26	1.47

Glue

LePage's Liquid

LePage's Glue is the recognized standard for adhesives. Made from the highest grade raw materials, carefully selected and manufactured with extreme care, under strict laboratory examinations. Extensively used by furniture manufacturers, carpenters and mechanics who require a first class quality glue.

No. 27 in Small Size Tubes	
Per dozen tubes.....	$1.73
Per tube	.15
No. 25 in One Ounce Bottles	
Per dozen bottles.....	$1.75
Per bottle	.15
No. 30 in Gill Cans	
Per dozen	$2.60
Per can	.25
No. 31 in Half Pint Cans	
Per dozen	$4.32
Per can	.40
No. 32 in Pint Cans	
Per dozen	$7.35
Per can	.70
No. 33 in Quart Cans	
Per dozen	$12.95
Per can	1.20
No. 35 in Gallon Cans	
Per dozen	$38.90
Per can	3.60
In five-gallon cans, per gallon.....	2.80

Genuine Peter Cooper

All Peter Cooper glue is carried in flake. Numbers 1¼ and 1⅝ are also carried ground.

Number	A Extra	1	1 x	1¼	1⅜	1⅝
Per pound	$0.43	$0.38	$0.35	$0.31	$0.29	$0.22

Round Glue Brushes

Rubberset

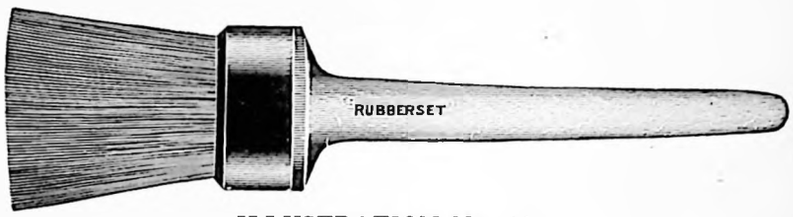


ILLUSTRATION No. 46

Gray Russian bristles. For bookbinders, paper box, furniture, piano and casket manufacturers and cabinet makers.

Size Number	Diameter Inches	Bristles out of Ferrule, Inches	Per Dozen	Each
1	1¼	2½	$10.15	$0.94
2	1½	2⅝	13.18	1.22
3	1¾	2¾	16.52	1.53
4	2	2⅞	23.44	2.17
5	2¼	3	29.48	2.73
6	2½	3⅜	41.90	3.88
7			65.45	6.06

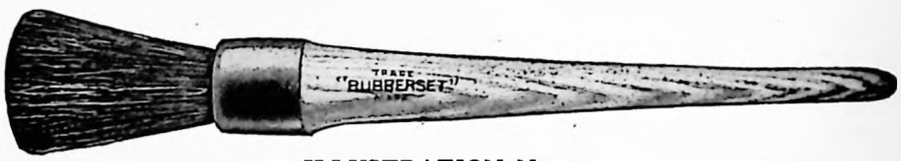


ILLUSTRATION No. 96

An excellent brush for small glue or paste work. All gray bristles.

Size Number	Diameter, Inches	Per Dozen	Each
1	½	$4.10	$0.38
2	⅝	5.18	.48
3	¾	6.05	.56
4	⅞	7.56	.70
5	1	9.50	.88
6	1⅛	11.45	1.06
7	1¼	13.82	1.28

H. S. & Co.

ILLUSTRATION No. 146

All gray gristles, iron ferrule pinned to handle.

Size, Number	0	1	2	3	4	5	6
Diameter, inches	1⅞	1¾	1 5/16	1 7/16	1 5/16	1 3/16	1 1/16
Regular, per dozen	$24.35	19.60	13.00	9.35	7.15	5.60	4.75
Each	2.25	1.80	1.20	.87	.66	.52	.44

 Above prices are subject to change without notice

Brushes

"Sash Tools"

Rubberset

No. 42

Hard rubber bound. Best bristle.

Size, Number	1	2	3	4	5	6	7
Diameter, inches	½	⅝	¾	⅞	1	1⅛	1¼
Per dozen	$4.20	$5.40	$5.72	$7.56	$9.60	$11.56	$15.12
Each	.39	.50	.53	.70	.89	1.07	1.40

H. S. & Co.

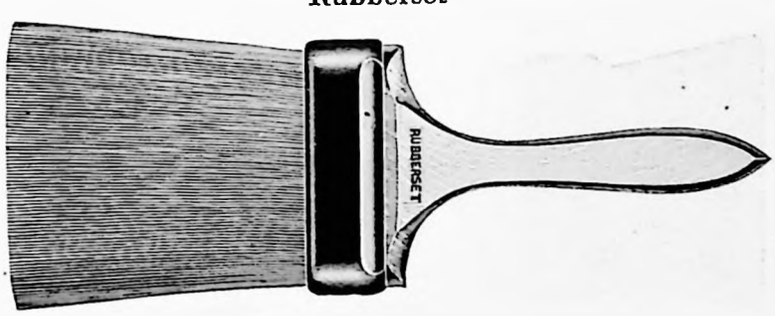
Style A

Wire ferrules. French bristle.

Size, Number	1	2	3	4	5	6	7	8	9
Per dozen	$0.97	$1.19	$1.50	$1.73	$1.95	$2.16	$2.70	$3.02	$3.35
Each	.09	.11	.14	.16	.18	.20	.25	.28	.31

Wall

Rubberset



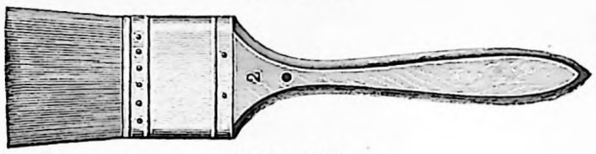
No. 133 Ex.

All white Russian bristles.

	Per Dozen	Each
3 inches wide	$28.65	$2.65
4 inches wide	38.88	3.60

Flat Varnish Brushes

Rubberset

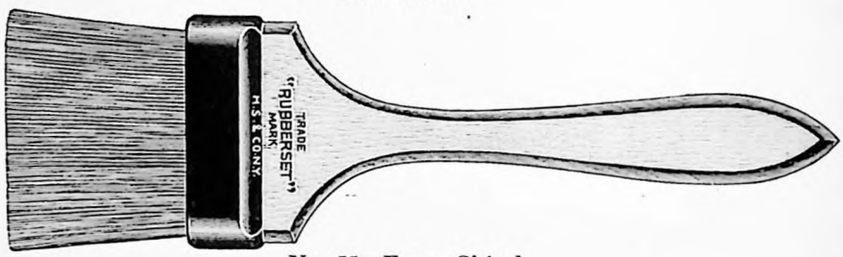


Koko XX

Chisel point, double thick, black bristle.

Width, inches	1	1½	2	2½	3	3½
Per dozen	$3.25	$4.65	$6.25	$8.65	$11.88	$23.75
Each	.30	.43	.58	.80	1.10	2.20

Rubberset

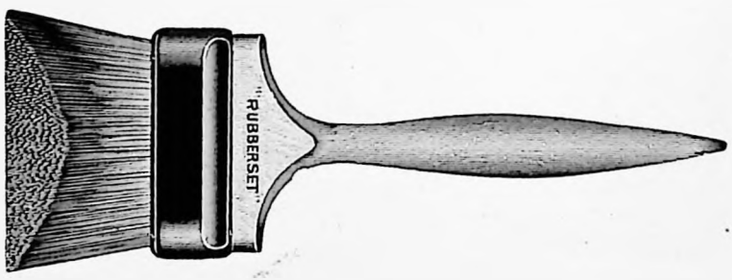


No. 75—Extra Chisel

Made of the best quality all black China bristles. Rubber bound.

	Per Dozen	Each
1 -inch	$4.00	$0.37
1½-inch	4.97	.46
2 -inch	6.90	.64
2½-inch	10.37	.96
3 -inch	15.12	1.40

Fitch Hair Flowing



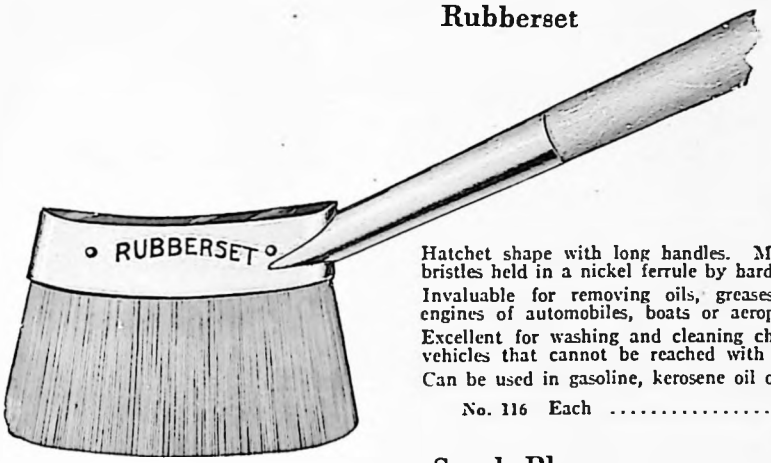
No. 61—Single Thick Chisel

	Per Dozen	Each
1 -inch	$7.56	$0.70
1½-inch	8.42	.78
2 -inch	9.94	.92
2½-inch	12.42	1.15
3 -inch	15.44	1.43

Above prices are subject to change without notice

Automobile Cleaning Brushes

Rubberset



Hatchet shape with long handles. Made of extra stiff Russian bristles held in a nickel ferrule by hard rubber.

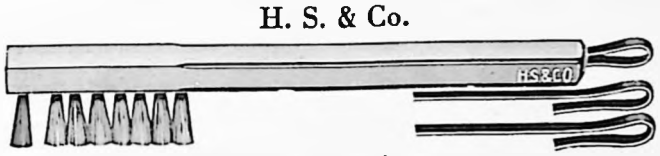
Invaluable for removing oils, greases and dirt from gasoline engines of automobiles, boats or aeroplanes.

Excellent for washing and cleaning chassis and remote parts of vehicles that cannot be reached with an ordinary brush.

Can be used in gasoline, kerosene oil or water.

No. 116 Each $0.90

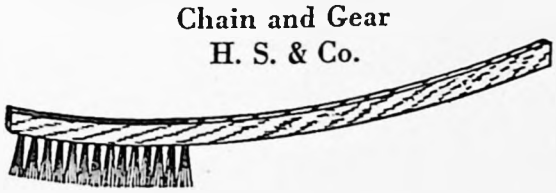
Spark Plug
H. S. & Co.



A combination wire and bristle brush for cleaning spark plugs.
The stiff fine wire for cleaning off soot, carbon, grease, etc.
The bristle tuft at end of brush for the finer parts.
Two stiff flat steels are furnished with every brush for cleaning out those parts of the plug ordinarily inaccessible.
Indispensable to the auto.
Put up in individual boxes.

No. 89 Each $0.20

Chain and Gear
H. S. & Co.

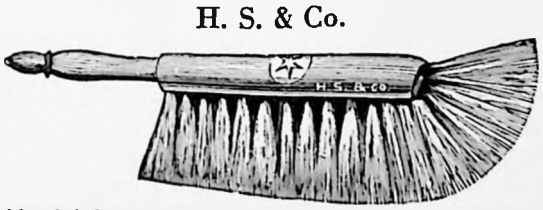


These brushes are made from fine tempered steel brush wire especially for cleaning gears and dirt from the different parts of automobiles. Well finished and handy to carry with the automobile kit, to which they are indispensable. Two rows black Chinese Bristles. ⅞-inch long.

No. 286 Per dozen $2.16
Each ..... .20

Bench Dusters

H. S. & Co.



		Each
No. 10*	5-inch block, white bristles	$0.42
No. AH3	10-inch block, white and gray bristles	.90
No. 2 Boston	9-inch block, gray bristles	1.20

*Our regular manual training-school duster.

Steel Wire Brushes

H. S. & Co.

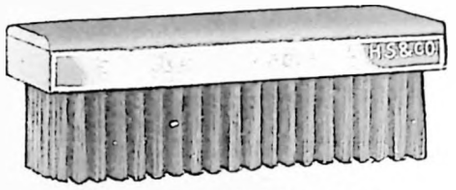


ILLUSTRATION No. 1780

Made from fine drawn steel wire for removing paint and varnish from surfaces to be refinished.

No.	Block, Inches	Rows of Wire	Length of Wire, Inches	Per Dozen	Each
2816½	7x2¼	6x14	2¼	$4.32	$0.40

ILLUSTRATION No. 177

A heavy, full brush made from specially tempered round steel wire; suitable for cleaning metal surfaces of all kinds; also extensively used for cleaning exterior work on stone, brick, terra cotta and rough painted surfaces. The heaviest and most serviceable brush made.

No.	Block, Inches	Rows of Wire	Length of Wire, Inches	Per Dozen	Each
177	7⅝x2½	5	1⅝	$6.05	$0.56
1779	7 x3	9	1¼	5.85	.54

ILLUSTRATION No. 1777

Adapted for cleaning architectural iron work, figured brass and bronze castings. Extensively used for pattern and braziers work; also as a file cleaning brush.

"Painters' Friend"—No. 1779

Short trimmed, very full and stiff; made of round tempered steel wire. Particularly recommended in connection with paint and varnish remover for removing varnish and wax from hardwood floors and for cleaning and preparing flat varnished or painted surfaces for refinishing. It leaves the cleaned surface in a smooth condition without roughing the wood; it takes the place of sandpaper, mineral wool and all other abrasives—works faster and lasts longer.

ILLUSTRATION Nos. 1784, 1781

Especially adapted for metal and painted surfaces where a narrow faced brush is required.

Nos.	Style Handle	Rows of Wire	Length of Wire	Per Dozen	Each
1777	Bent	3	1¼	$3.25	$0.30
1781	Shoe	4	1¼	3.80	.35
1784	Shoe	2	1⅛	3.15	.29

No. 1778

No. 1778

For cleaning mouldings and in applying preparation for removing paints, varnish, etc. They will also be found a handy house brush for removal of dirt and grease from stoves, etc.

	Per Dozen	Each
Block is 2⅜x1⅛ inches, 6 rows of wire, 2½ inches long.....	$4.32	$0.40

Above prices are subject to change without notice

Padlocks

Yale

Full Size Cuts

ILLUSTRATION No. 813

Cast Bronze Case and Shackle
Self-locking, Spring Shackle

Nos.	813	823	833	843	853	863
Size, inches	1	1¼	1½	1¾	2	2¼
Changes	48	48	48	72	144	144
Per dozen	$16.28	$17.50	$19.70	$21.88	$24.75	$29.70
Each	1.52	1.63	1.84	2.04	2.30	2.77

With Chain 9 Inches Long

Nos.	813½	843½	863½
Size, inches	1	1¾	2¼
Changes	48	72	144
Per dozen	$17.76	$23.75	$31.60
Each	1.66	2.22	2.95

ILLUSTRATION No. 830

Cast Bronze Case, Steel Shackle
Self-locking, Spring Shackle

Master Keying: In one set not exceeding 4000, all different, with a master key to pass all locks; or a somewhat less quantity may be divided into sets, with a master key to pass the locks in each set and a grand master key to pass all the locks. This applies to all except No. 830, which can only be master keyed up to 250 sets.

5 Pin Tumblers, Practically Unlimited Changes

Nos.	830	840	840½	850	870
Size, inches	1½	1¾	1¾	2	2½
Per dozen	$21.58	$26.25	$26.12	$32.20	$48.75
Each	2.00	2.45	2.63	3.00	4.55

Note.—No. 840 also carried in stock alike.
No. 840½ same as No. 840, but has chain.

Padlocks

Full-Size Cuts

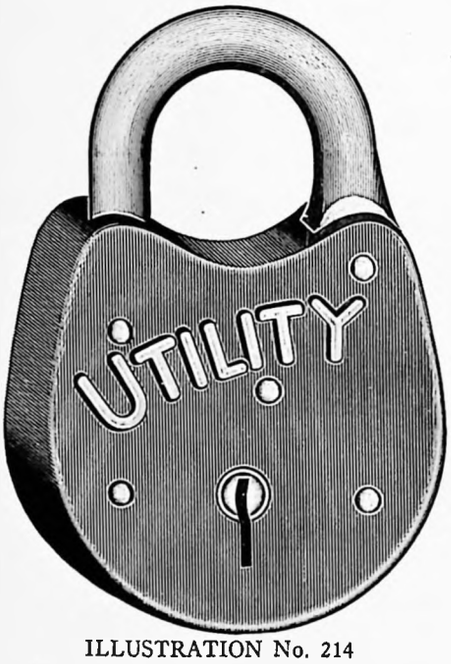
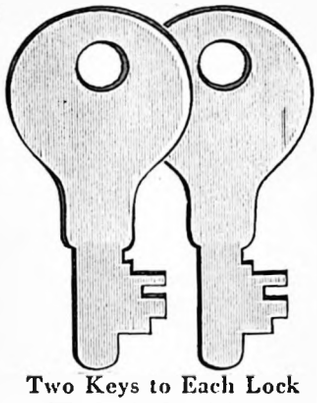


ILLUSTRATION No. 214



Two Keys to Each Lock

H. S. & Co. Utility

Iron black japanned case, brass-plated shackle. Self-locking spring shackle.

Nos.	161	182	193	214
Diameter, inches..	1¼	1½	1¾	2
Changes	12	12	12	12
Per dozen	$1.85	$2.05	$2.38	$2.92
Each	.17	.19	.19	.27

Brass case, brass-plated shackle. Self-locking spring shackle.

Nos.	1601	1802	1903	2104
Diameter, inches..	1¼	1½	1¾	2
Changes	12	12	12	12
Per dozen	$2.69	$3.13	$3.67	$4.32
Each	.24	.29	.34	.40

Keys can be furnished all different, per dozen, or else all keyed alike.

H. S. & Co.

Two Keys to Each Lock

Cast bronze case and shackle. Self-locking spring shackle. Six levers. Practically unlimited changes.

No. 127 2¼ inches diameter, without chain.

Per dozen $11.90
Each 1.10

No. 127C 2¼ inches diameter, with heavy galvanized chain 9 inches long.

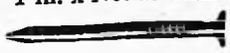
Per dozen $12.96
Each 1.20

Above padlocks can be furnished keyed alike.

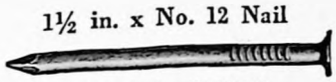
ILLUSTRATION No. 127

Wire Nails and Brads

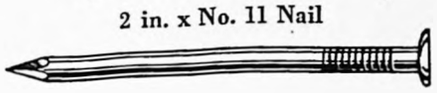
1 in. x No. 15 Nail



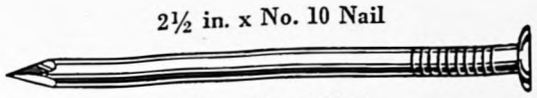
1½ in. x No. 12 Nail



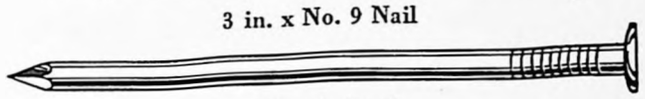
2 in. x No. 11 Nail



2½ in. x No. 10 Nail



3 in. x No. 9 Nail



2½ x 10 Brad

In ordering state if flat head or brad heads are wanted.

Prices Per Pound

⅜-inch

No. 19	$0.30
No. 20	.33
No. 21	.41

½-inch

No. 18	$0.21
No. 19	.25
No. 20	.28

⅝-inch

No. 16	$0.17
No. 17	.17
No. 18	.19
No. 19	.21
No. 20	.25

¾-inch

No. 14	$0.13
No. 15	.14
No. 16	.14
No. 17	.15
No. 18	.17
No. 19	.20
No. 20	.23

⅞-inch

No. 13	$0.11
No. 14	.12
No. 15	.12
No. 16	.13
No. 17	.14
No. 18	.15

1-inch

No. 12	$0.10
No. 13	.10
No. 14	.11
No. 15	.11
No. 16	.12
No. 17	.13
No. 18	.14
No. 19	.17

1¼-inch

No. 12	$0.10
No. 13	.10
No. 14	.10
No. 15	.11
No. 16	.11
No. 17	.13
No. 18	.14

1½-inch

No. 12	$0.10
No. 13	.10
No. 14	.10
No. 15	.10
No. 16	.11
No. 17	.13
No. 18	.14

1¾-inch

No. 12	$0.09
No. 13	.09
No. 14	.10
No. 15	.10
No. 16	.11

2-inch

No. 10	$0.09
No. 11	.09
No. 12	.09
No. 13	.09
No. 14	.10
No. 15	.10
No. 16	.12

2¼-inch

No. 11	$0.09
No. 12	.09
No. 13	.09
No. 14	.10

2½-inch

No. 10	$0.09
No. 11	.09
No. 12	.09
No. 13	.09
No. 14	.10

3-inch

Nos. 9 and 10	$0.08
No. 11	.09
No. 12	.09
No. 13	.09

3½-inch

Nos. 8 and 10	$0.08
No. 11	.09

4-inch

Nos. 5, 6, 8, 10	$0.08

All Nails 4½, 5 and 6 Inches Long, per pound..... $0.08

Tacks

Upholsterers

¼-lb. Papers

Nos.	1	1½	2	2½	3	4	6
Per Dozen Papers	$1.08	$0.86	$0.86	$0.76	$0.65	$0.65	$0.65
Per Paper	.10	.08	.08	.07	.06	.06	.06

½-lb. Papers

Nos.	8	10	12	14	16
Per Dozen Papers	$0.97	$0.97	$0.86	$0.86	$0.86
Per Paper	.09	.09	.08	.08	.08

1-lb. Papers

Nos.	1	1½	2	2½	3	4	6
Per Dozen Papers	$4.00	$3.24	$3.13	$2.92	$2.48	$2.38	$2.16
Per Paper	.37	.30	.29	.27	.23	.22	.20

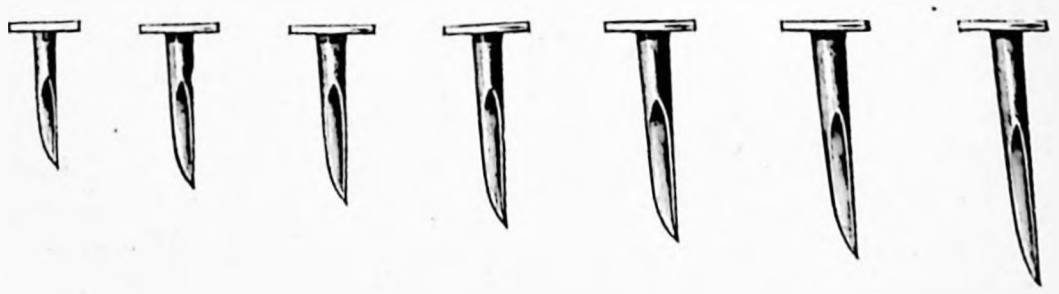
Nos.	8	10	12	14	16	18	20	24
Per Dozen Papers	$2.05	$1.95	$1.85	$1.85	$1.85	$1.85	$1.85	$1.85
Per Paper	.19	.18	.17	.17	.17	.17	.17	.17

Galvanized

In 1-lb. Papers

Nos.	3	4	8	10	12
Per Dozen Papers	$3.00	$2.92	$2.60	$2.48	$2.38
Per Paper	.28	.27	.25	.23	.22

American Flat Head Carpet. Soft Steel



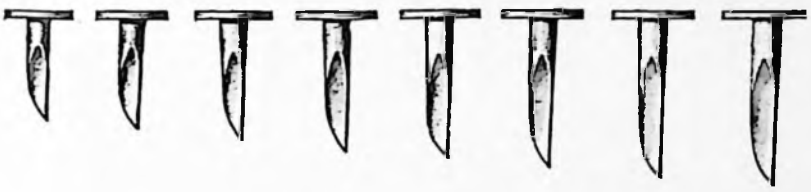
Blued

½-lb. Papers

Nos.	3	4	6	8	10	12	14
Per Dozen Papers	$1.08	$0.97	$0.97	$0.86	$0.86	$0.86	$0.86
Per Paper	.10	.09	.09	.08	.08	.08	.08

Tacks

Bill Posters, Soft Steel



Blued

½-lb. Papers

Nos.	2	2½	3	6	8	10
Per Dozen Papers	$1.20	$1.08	$1.08	$0.97	$0.86	$0.86
Per Paper	.11	.10	.10	.09	.08	.08

Gimp

Blued

¼-lb. Papers

Nos.	2	2½	3	4	6
Per Dozen Papers	$0.86	$0.76	$0.65	$0.65	$0.65
Per Paper	.08	.07	.06	.06	.06

Cut Copper

Nos.	2	2½	3	4	6	8	10	12
Length, Inches	4/16	5/16	6/16	7/16	8/16	9/16	10/16	11/16

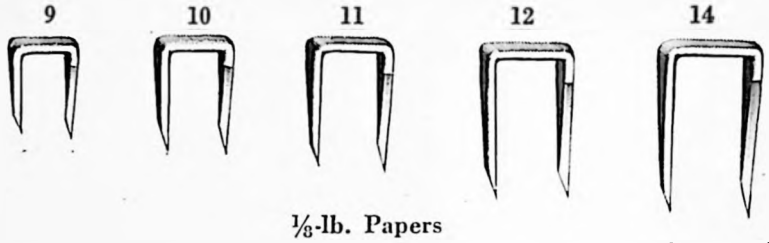
¼-lb. Papers

Per Dozen Papers	$1.40	$1.30	$1.30	$1.30	....	....	....
Per Paper	.13	.12	.12	.12	....	....	....

1-lb. Papers

Per Dozen Papers	$5.60	$5.40	$5.18	$4.97	$4.85	$4.85	$4.85	$4.75
Per Paper	.52	.50	.48	.46	.45	.45	.45	.44

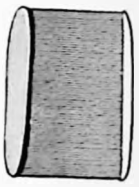
Double Pointed Tacks



1/8-lb. Papers

Nos.	9	10	11	12	14
Blued, per dozen	$0.35	$0.33	$0.29	$0.28	$0.27
Tinned, per dozen	.39	.37	.33	.32	.31
Blued, per paper	.05	.05	.05	.05	.05
Tinned, per paper	.05	.05	.05	.05	.05

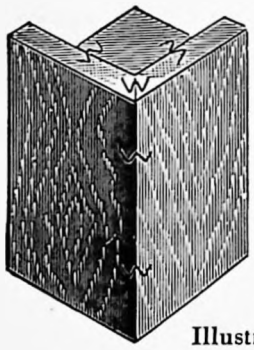
Clamp Nails



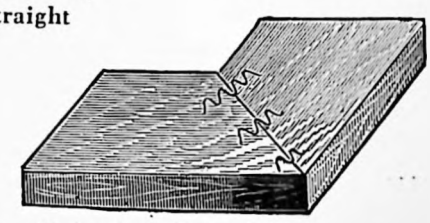
Size, inches	¾	1	1¼	1½	2
Per 1000	$2.35	$2.55	$2.70	$3.10	$3.55

Corrugated Steel Fasteners

Plain



Straight



Illustrations Show Method of Fastening

Corrugated Fasteners are a cheap and efficient substitute for nails, dowels, screws, etc. Straight Fasteners are preferable when the joint is well made. Divergent Fasteners draw the parts of the work together. The Saw Edge Fasteners drive easier than the Plain, but are more expensive.

Prices on Straight Type

Size, inches		3/16x3	3/16x4
Per 10000		$2.85	$3.56
Per 500		.19	.23
Size, inches	1/4x3	1/4x4	1/4x5
Per 10000	$2.85	$3.56	$4.28
Per 500	.19	.23	.29
Size, inches		3/8x4	3/8x5
Per 10000		$4.50	$5.70
Per 500		.31	.38
Size, inches		1/2x4	1/2x5
Per 10000		$4.99	$6.18
Per 500		.33	.41
Size, inches	5/8x5	5/8x6	5/8x7
Per 10000	$8.08	$8.79	$10.45
Per 500	.54	.59	.69
Size, inches	3/4x5	3/4x6	3/4x7
Per 10000	$8.79	$10.20	$11.88
Per 500	.59	.68	.79

 Above prices are subject to change without notice

Brass Furniture Nails

Full Size Cuts

No. 9 No. 10 No. 11 No. 12 No. 19

	9	10	11	12	19
Nos.					
Packed 1000 in a box—					
Per 1000	$2.10	$1.90	$1.26	$0.90	$0.90
Packed 100 in a carton—					
Per 1000	2.70	2.17	1.78	1.39	1.39
Per 100	.32	.26	.21	.17	.17

No. 41 No. 42 No. 43

	41	142	42	42 Bis	143	43	43 Bis
Nos.							
Length of Shank, inch	5/8	1/16	5/8	3/4	1/16	5/8	3/4
Packed 1000 in a box—							
Per 1000	$1.40	$1.42	$1.12	$1.12	$0.84	$0.84	$0.84
Packed 100 in a carton—							
Per 1000	1.93		1.62			1.30	
Per 100	.23		.19			.16	

Leather Finish Nails

Carried in stock in following numbered colors:

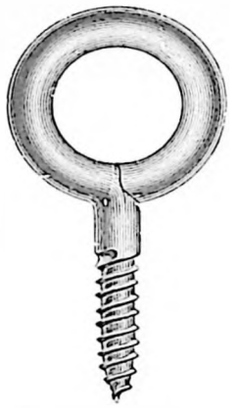
No. 75 Dark Maroon No. 85 Dark Green
No. 82 Tan No. 96 Black

No. 2901

No. 2902

	2901	2902
Nos.		
Packed 1000 in a box—		
Per 1000	$0.88	$0.80
Packed 100 in a carton—		
Per 1000	.98	.90
Per 100	.12	.11

Wire Screw Eyes



Nos. 8 and 1008

Nos. 10 and 1010

Nos. 12 and 1012

No. 14

No. 208

Nos. 210 and 1210

Nos. 212 and 1212

Nos. 214 and 1214

Nos. 112 and 1112

Nos. 110 and 1110

Nos. 108 and 1108

No. 107½

No. 108½

No. 110½

No. 112½

No. 114½

Iron

Nos.	8	10	12	14	108	110
Per Gross	$0.53	$0.40	$0.27	$0.24	$0.53	$0.40
Per Dozen	.05	.05	.05	.05	.05	.05
Nos.		112	208	210	212	214
Per Gross		$0.27	$0.53	$0.40	$0.27	$0.24
Per Dozen		.05	.05	.05	.05	.05
Nos.		107½	108½	110½	112½	114½
Per Gross		$0.61	$0.53	$0.40	$0.27	$0.24
Per Dozen		.06	.05	.05	.05	.05

Brass

Nos.	1010	1012	1108	1110	1112
Per Gross	$1.45	$0.88	$2.08	$1.45	$0.88
Per Dozen	.14	.09	.20	.14	.09
Nos.			1210	1212	1214
Per Gross			$1.45	$0.88	$0.55
Per Dozen			.14	.09	.06

Above prices are subject to change without notice

Wire Screw Hooks

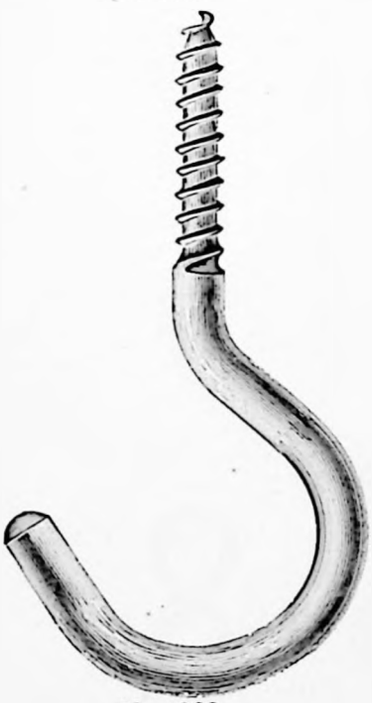
No. 6

No. 8

No. 10

No. 12

No. 14



No. 208

No. 210

No. 110

No. 112

No. 114

Iron

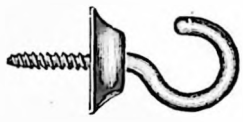
Nos.	6	8	10	12	14
Per Gross	$1.00	$0.64	$0.48	$0.40	$0.32
Per Dozen	.10	.07	.05	.05	.05
Nos.	208	210	110	112	114
Per Gross	$0.64	$0.48	$0.48	$0.40	$0.32
Per Dozen	.07	.05	.05	.05	.05

Brass Shouldered Screw Hooks

No. 2412 Cut Full Size of ⅝-inch Hook

Size, Inches	½	⅝	¾	1	1¼	1½	1¾
Per Gross	$0.90	$0.93	$0.96	$1.26	$2.16	$2.64	$3.60
Per Dozen	.09	.09	.10	.13	.22	.26	.36

Brass Shouldered Cup Hooks

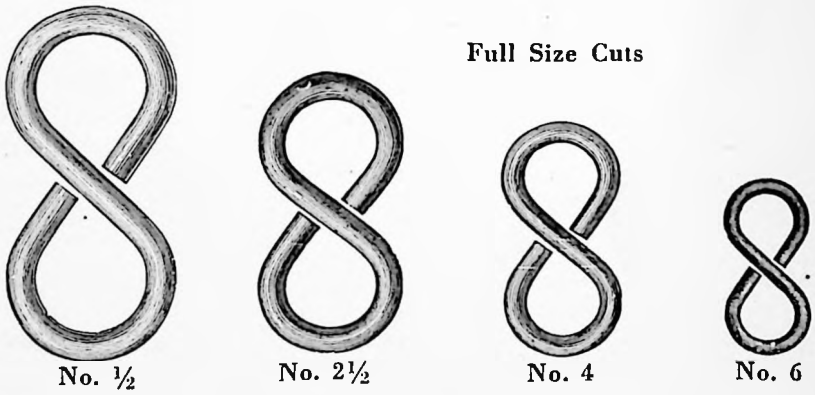


No. 281 Cut Full Size of ⅝-inch Hook

Size, Inches	½	⅝	¾	⅞	1	1⅛	1¼	1½	1¾
Per Gross	$0.90	$0.93	$0.96	$1.08	$1.26	$1.68	$2.16	$2.64	$3.60
Per Dozen	.09	.09	.10	.11	.13	.17	.22	.26	.36

Brass S Hooks

Full Size Cuts



No. ½ No. 2½ No. 4 No. 6

Nos.	½	2½	4	6
Brass, Per Gross	$1.75	$1.07	$0.70	$0.48
Brass, Per Dozen	.18	.11	.07	.05
Nickel-plated, Per Gross	....	....	.97	.70
Nickel-plated, Per Dozen	....	....	.10	.07

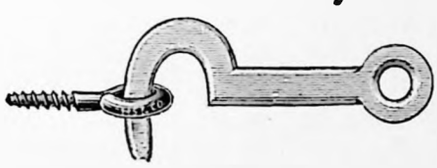
Above prices are subject to change without notice

Gate Hooks and Eyes

Wire

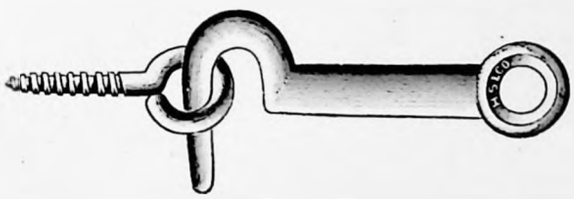
Length of Hook, Inches	Bright		Galvanized		Brass	
	Per Gross	Per Dozen	Per Gross	Per Dozen	Per Gross	Per Dozen
1½	$1.05	$0.11	.....	.....	$3.85	$0.35
2	1.28	.13	$1.95	$0.20	4.80	.44
2½	1.60	.16	.....	.....	5.75	.52
3	1.92	.19	.....	.....	7.35	.67
3½	2.32	.23	.....	.....	.....	.....
4	2.72	.27	4.14	.41	10.25	.93
4½	3.20	.32	.....	.....	.....	.....
5	3.85	.39	.....	.....	.....	.....
6	4.80	.48	.....	.....	17.60	1.60
8	5.75	.58	.....	.....	20.80	1.90
10	6.72	.67	.....	.....	.....	.....
12	7.68	.77	11.67	1.17	.....	.....
16	11.29	1.12	.....	.....	.....	.....

Hooks and Eyes



Nos. 61 and 61 N

Length Hook, Inches	¾	1	1¼	1½
No. 61 Brass. Per Gross	$2.05	$2.25	$2.45	$2.65
Per Dozen	.21	.23	.25	.27
No. 61N Nickel-plated. Per Gross	...	2.25	2.70	....
Per Dozen	...	.23	.27	....



No. 60 Brass, Heavy

Length Hook, Inches	2	2½
Per Gross	$3.85	$5.25
Per Dozen	.38	.53

Wood Screws

Round Head

Flat Head

Oval Head

Iron

Price per Gross

¼ In.		⅜ In.		½ In.		⅝ In.		¾ In.		⅞ In.		1 In.	
No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$
0	.72	0	.72	1	.72	2	.72	3	.75	4	.82	4	.84
1	.72	1	.72	2	.72	3	.72	4	.78	5	.85	5	.87
2	.72	2	.72	3	.72	4	.75	5	.82	6	.90	6	.92
3	.72	3	.72	4	.75	5	.78	6	.85	7	.94	7	.98
		4	.72	5	.78	6	.82	7	.90	8	1.00	8	1.05
		5	.75	6	.80	7	.86	8	.86	9	1.05	9	1.10
		6	.78	7	.84	8	.92	9	1.00	10	1.15	10	1.20
				8	.90	9	.98	10	1.10	11	1.25	11	1.30
						10	1.07	11	1.15	12	1.35	12	1.40
								12	1.25			14	1.70

1¼ In.		1½ In.		1¾ In.		2 In.		2¼ In.		2½ In.		2¾ In.	
No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$
5	.98	6	1.15	6	1.35	6	1.50	8	1.75	8	2.20	10	2.90
6	1.05	7	1.20	7	1.45	7	1.55	9	1.85	9	2.30	12	3.10
7	1.10	8	1.30	8	1.50	8	1.60	10	1.95	10	2.40	14	3.30
8	1.15	9	1.35	9	1.55	9	1.65	12	2.20	12	2.60	16	3.90
9	1.20	10	1.40	10	1.60	10	1.75	14	2.65	14	2.90	20	6.10
10	1.30	11	1.50	11	1.70	11	1.85	16	3.50	16	3.65		
11	1.40	12	1.65	12	1.80	12	2.00	18	4.55	18	4.70		
12	1.55	14	2.00	14	2.25	13	2.20	20	5.30	20	5.80		
14	1.90	16	2.80	16	2.90	14	2.45						
16	2.50	18	3.80	18	4.00	16	3.10						
18	3.30	20	4.30	20	4.50	18	4.20						
20	4.00					20	4.80						

3 In.		3½ In.		4 In.		5 In.		6 In.			
No.	$	No.	$	No.	$	No.	$	No.	$		
8	3.05	12	4.30	12	5.40	20	11.50	20	16.00		
9	3.10	14	4.50	14	5.90			24	20.00		
10	3.15	16	4.95	16	6.50						
12	3.30	18	6.15	18	7.60						
14	3.50	20	7.30	20	8.60						
16	4.20	22	8.70	24	11.20						
18	5.50	24	10.20								
20	6.50										
22	7.50										

The following varieties of Iron Screws are invoiced from this List at varying Discounts. Flat, Round, Fillister and Oval Head Screws, Dowel, Winged, Headless, Pinched, Bung Head and Felloe Screws, Bright, Blued, Nickel Plated, Silver Plated, Brassed, Bronzed, Coppered, Japanned, Lacquered, Tinned and Galvanized, also Drive Screws.

Flat Head Bright Iron	Discount on 1 gross, 82½%.	Discount on 10 gross, 82½-10%.
Round Head Blued Iron	Discount on 1 gross, 80%.	Discount on 10 gross, 80-10%.

Above prices are subject to change without notice

Wood Screws

Round Head Screws

Flat Head

Oval Head Screws

Brass

Price per Gross

¼ In.		⅜ In.		½ In.		⅝ In.		¾ In.		⅞ In.		1 In.	
No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$
0	.84	0	.84	1	.92	2	1.00	3	1.18	4	1.55	4	1.70
1	.84	1	.87	2	.96	3	1.08	4	1.25	5	1.60	5	1.75
2	.88	2	.92	3	1.02	4	1.15	5	1.40	6	1.65	6	1.80
3	.92	3	.97	4	1.08	5	1.30	6	1.55	7	1.90	7	2.10
		4	1.04	5	1.20	6	1.40	7	1.75	8	2.20	8	2.45
		5	1.12	6	1.30	7	1.60	8	2.00	9	2.50	9	2.80
		6	1.20	7	1.45	8	1.85	9	2.30	10	2.90	10	3.15
				8	1.65	9	2.10	10	2.65	11	3.35	11	3.65
						10	2.40	11	3.00	12	3.70	12	4.10
								12	3.35			14	5.05

1¼ In.		1½ In.		1¾ In.		2 In.		2¼ In.		2½ In.		2¾ In.	
No.	$	No.	$	No.	$	No.	$	No.	$	No.	$	No.	$
5	2.25	6	3.10	6	3.95	6	5.15	8	6.85	9	9.40	10	11.65
6	2.35	7	3.20	7	4.00	7	5.20	9	6.95	10	9.50	11	11.80
7	2.45	8	3.30	8	4.10	8	5.25	10	7.05	11	9.60	12	11.95
8	2.85	9	3.65	9	4.20	9	5.30	11	7.25	12	9.70	14	12.25
9	3.20	10	4.25	10	4.70	10	5.40	12	7.90	14	10.75	16	14.20
10	3.50	11	4.65	11	5.35	11	6.15	14	9.80	16	13.00	20	21.60
11	4.10	12	5.35	12	6.05	12	6.85	16	11.90	18	16.95		
12	4.65	14	6.65	14	7.35	13	7.55	18	15.40	20	19.85		
14	5.85	16	8.35	16	9.50	14	8.45	20	18.00				
16	7.20	18	10.85	18	12.40	16	10.70						
18	9.35	20	12.65	20	14.50	18	13.90						
20	10.45					20	16.30						

3 In.		3½ In.		4 In.		5 In.		6 In.	
No.	$	No.	$	No.	$	No.	$	No.	$
10	13.70	11	16.00	12	18.60	20	40.70	20	46.80
11	13.85	12	16.15	13	18.80			24	61.90
12	14.00	14	16.45	14	19.00				
14	14.30	16	17.70	16	20.35				
16	15.40	18	22.75	18	26.90				
18	19.95	20	26.90	20	30.80				
20	23.40	22	31.20	24	40.70				
22	27.10	24	35.80						

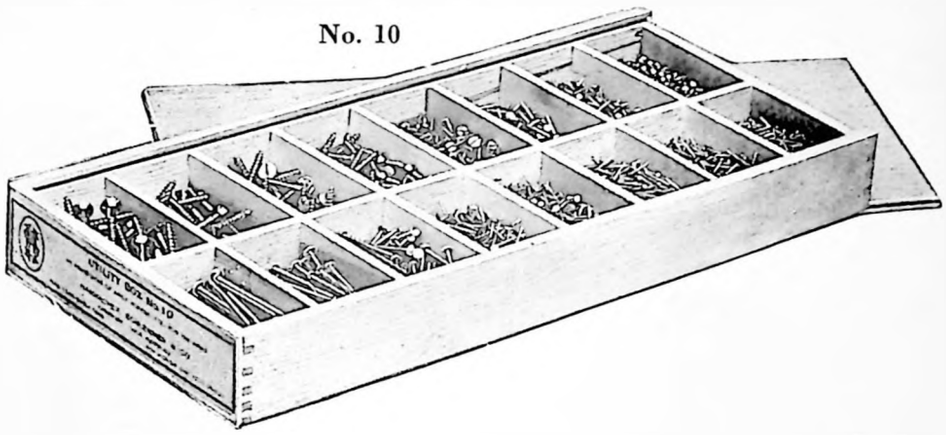
The following varieties of Screws are invoiced from this List at varying Discounts: Flat, Round, Fillister and Oval Head Screws, of Brass, Bronze Metal, Nickel and Silver Plated on Brass.

Flat Head	Discount on 1 gross, 77½%.	Discount on 10 gross, 77½-10%.
Round and Oval Head	Discount on 1 gross, 75%.	Discount on 10 gross, 75-10%.

Utility Boxes

These outfits have been carefully designed to meet the requirements of the "Odd Job Man," as well as those who like to make their own repairs. Both boxes are so constructed that each compartment keeps its contents intact and there is a sufficient supply of each item to last the average man a long time.

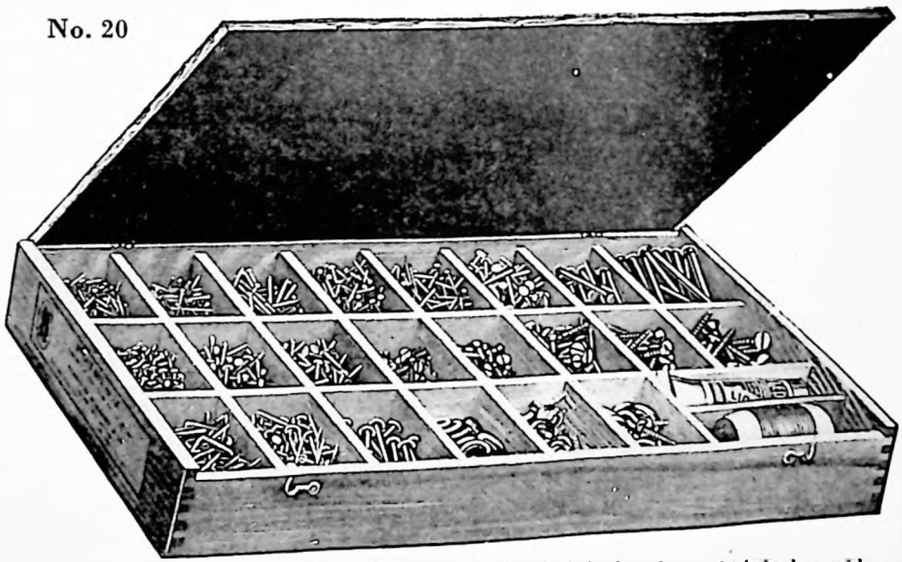
No. 10



This box is 15 inches long, 7 inches wide and 1¾ inches deep, outside measurements; with slide cover and has 16 compartments, containing the following assortment:
Wire Brads. ⅝, ⅞ and 1¼ inches long.
Wire Nails. ⅝, 1, 1½, 2 and 2½ inches long.
Flat Head Iron Screws, ½, ¾, 1, 1¼ and 1½ inches long.
Upholsterers' Tacks, 1½, 4 and 8 ounce.

	Each
Complete	$1.40
Boxes only	.50

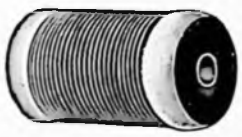
No. 20



This box is made of hard wood and has hinged cover. It is 15¼ inches long, 9¾ inches wide and 2 inches deep, outside measurements. It has 24 compartments, containing the following assortments:
Wide Brads. ⅝, ⅞ and 1¼ inches long.
Wire Nails. ⅝, 1, 1½, 2 and 2½ inches long.
Flat Head Iron Screws, ½, ¾, 1, 1¼ and 1½ inches long.
Upholsterers' Tacks. 1½, 4 and 8 ounce.
Assorted Brass Cup and Screw Hooks.
Assorted Bright Wire Screw Eyes.
Assorted Brass Capped Picture Nails.
Carton of Gilt Nails.
Package of Double Pointed Tacks.
Tube of Le Page's Liquid Glue.
Spool of Copper Wire.

Complete	$3.20
Boxes only	1.00

Wire on Spools



Washburn & Moen Gauge No.	No. of Feet on Spool	Steel Annealed Extra Large Spools Per Doz.	Each
16	65	$2.27	$0.21
17	91	2.38	.22
18	126	2.50	.23
19	169	2.50	.23
20	226	2.60	.24
21	283	2.60	.24
22	324	2.70	.25
23	418	2.80	.26
24	528	2.92	.27
25	700	3.03	.28
26	897	3.15	.29
27	966	3.25	.30
28	1067	3.35	.31
29	1242	3.46	.32
30	1418	3.68	.34
31	1607	3.78	.35
32	1701	4.10	.38
33	2012	4.32	.40
34	2578	4.65	.43
35	3092	5.30	.49
36	3442	6.27	.58

Tinned Steel Annealed
Extra Large Spools

Nos.	Per Dozen Spools	Per Spool
16	$3.24	$0.30
17	3.24	.30
18	3.35	.31
19	3.35	.31
20	3.46	.32
21	3.57	.33
22	3.68	.34
23	3.78	.35
24	3.89	.36
25	4.00	.37
26	4.11	.38
27	4.32	.40
28	4.54	.42

Brass Spring or Annealed
Extra Large Spools

Washburn & Moen Gauge No.	No. of Feet on Spool	Per Doz.	Each
16	65	$6.92	$0.64
17	91	6.92	.64
18	126	6.92	.64
19	169	6.92	.64
20	226	6.92	.64
21	283	7.46	.69

Brass Spring or Annealed
Large Spools

16	35	$3.68	$0.34
17	44	3.68	.34
18	55	3.68	.34
19	77	3.68	.34
20	111	3.68	.34
21	128	3.90	.36

Soft Copper—Extra Large Spools

16	65	$6.05	$0.56
17	91	6.05	.56
18	126	6.05	.56
19	169	6.05	.56
20	226	6.05	.56
21	283	6.50	.60

Soft Copper—Large Spools

16	35	$3.15	$0.29
17	44	3.15	.29
18	55	3.15	.29
19	77	3.15	.29
20	111	3.15	.29
21	128	3.45	.32

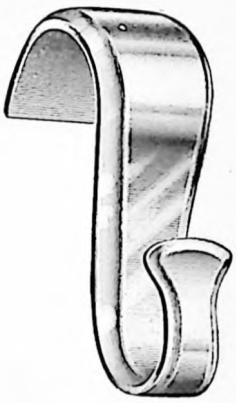
Hook Tacks

A Combination Hook and Thumb Tack. The hook is brass and head of tack is celluloid, colored red, white or blue. For hanging pictures and other small articles on the wall or in show windows.

Mounted six on a block.

Per dozen $0.18
Gross 1.82

Moulding Hooks



H. S. & Co.

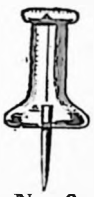
No. 5976 Polished brass to fit 1½-inch moulding.
Per dozen $1.15
Each ..... .11

No. 5935 Polished brass to fit 2-inch moulding.
Per dozen $1.30
Each ..... .12

Glass Push Pins

No. 1

No. 1 Per card containing 6 pins...$0.10



No. 2

No. 2 Per card containing 6 pins...$0.10

Pushless Hangers

No. 24

No. 25

No. 28

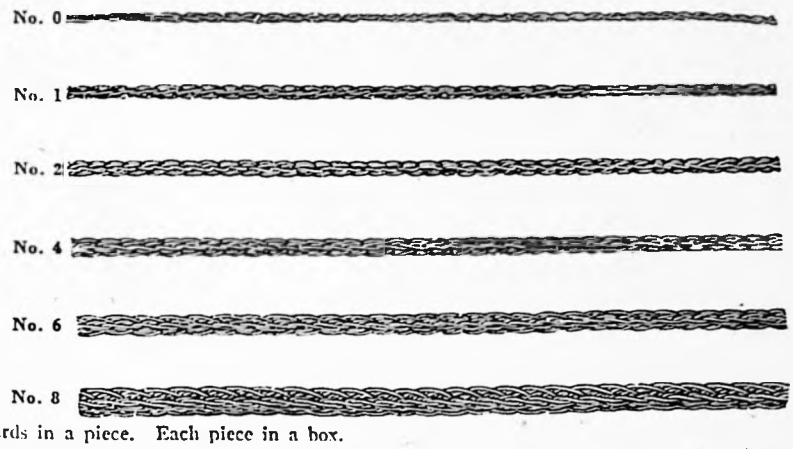
Moore—Cuts Full Size

Made of brass. Has great holding power in wood or brass.

Nos.		
24	Per card of 10 hangers	$0.10
25	Per card of 6 hangers	0.10
27	Per card of 3 hangers	0.10
28	Per card of 2 hangers	0.10

Above prices are subject to change without notice

Picture Wire



Tinned. 25 yards in a piece. Each piece in a box.

Nos.	0	1	2	4	6	8
Dozen pieces	$0.72	$1.08	$1.45	$2.35	$3.25	$4.35
Per piece	.07	.11	.15	.24	.33	.44

Sash Cord

Silver Lake

White Braided. Hanks Contain 100 Feet

Nos.	6	7	8	9	10	12
Diameter, inch	7/32	15/64	1/4	17/64	9/32	5/16
Approximate weight per hank, pounds	1½	1¾	2¼	2¾	3¼	5
In lots of one dozen hanks. Per pound	$0.69	$0.66	$0.66	$0.65	$0.65	$0.65
Less than one dozen hanks. Per pound	.77	.74	.74	.73	.73	.73

Eureka

White Braided

Nos.	7	8
Diameter, inch	15/64	1/4
In dozen hank lots. Per pound	$0.49	$0.48
Less than dozen hank lots. Per pound	.56	.54

Manila Rope

3-Strand, Regular Laid

Diameter, inches	1/4	5/16	3/8	1/2	5/8	3/4	1
Circumference, inches	3/4	1	1⅛	1½	2	2¼	3
Approximate number of feet to pound	55	41	27	13⅓	7½	6	3⅓
Tensile strength, pounds	625	1,000	1,280	2,400	4,000	4,700	7,600
In coils, per pound	$0.22½	$0.22½	$0.22	$0.21¼	$0.20¾	$0.20	$0.20
In 10-pound lots, per pound	.23½	.23½	.22¾	.22¼	.21½	.21	.21
Less 10 pounds, per pound	.25	.25	.24	.24	.23	.23	.23

Domes of Silence

No. ½

No. ⅝

No. ¾

No. ⅞

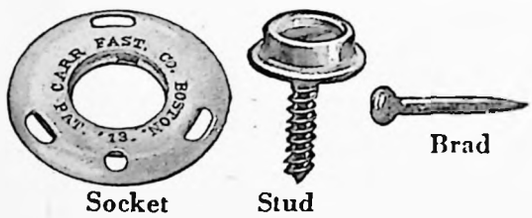
No. 1⅛

Made of hardened, highly-polished nickel-plated steel. Glide easily, silently and smoothly over carpets and floors. Can be attached in a few seconds; requires neither screws nor nails. Can be fitted to all light furniture such as chairs, tables, etc., by a slight tap of hammer and to heavy furniture by simply placing one under each corner—they adjust themselves to all kinds of furniture.

Numbers ½, ⅝, ¾, ⅞ and 1⅛ are put up in sets of 4 pieces in a small carton and 36 of these cartons are packed in a large display box. Number ⅜ packed 12 sets in a carton.

Nos.	⅜	½	⅝	¾	⅞	1⅛
Diameter, inches	15/32	1/2	33/64	37/64	13/16	1⅛
Per dozen sets	$1.00	$1.00	$1.00	$1.00	$1.00	$1.50
Per set of 4	.10	.10	.10	.10	.10	.15

Carpet or Rug Fastener for Houses



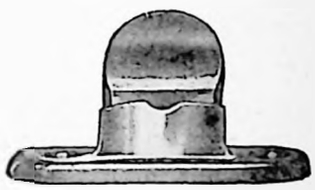
Socket Stud Brad

A neat, economical and very practical device. Socket of heavy gauge brass, nickeled. The brad, driven through stud, securely holds carpet to floor, leaving no noticeable mark on floor in case it is removed.

No. 4154 Complete, per gross.....$3.90
No. 4154 Complete, per dozen..... .36

Turn-Button Fasteners

Common Sense



Two Screw Type

Made of brass, carefully finished and inspected so as to insure best possible results. Eyelets and washers furnished with all turnbuttons; one gross with each gross of singles and two with each gross of doubles or triples.

Per Gross

No. 401 Single, complete $4.18
No. 402 Double, complete 5.48

Rubber Tips

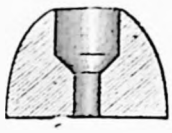
Full Size Cuts

No. 01

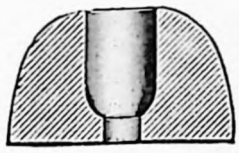
No. 01½

No. 02

No. 02



No. 137



No. 139

Nos.	01	01½	02	137	139
Per 1,000	$1.65	$2.53	$2.93	$4.15	$2.35
Per 100	.28	.38	.44	.45	.73
Per Dozen	.05	.05	.05	.06	.11

With Slotted Screw and Brass Washer

Full Size Cuts

No. 231

No. 232

Cut shows how the screw seats itself into the washer when the tip is applied.

No. 233

No. 234

The perforations in the washer (see illustration), allow the rubber to flow through, thereby preventing the head from coming off and in addition making a strong, durable tip.

Nos.	231	232	233	234
Per Gross	$1.62	$1.73	$1.84	$2.27
Per Dozen	.15	.16	.17	.21

Rubber Head Nails

Full Size Cuts

No. 1 Black

No. 2 Black
No. 20 Red

No. 3 Black
No. 30 Red

No. 0 Black

No. 00 Black

Large brass-headed nails only are used in the manufacture of these rubber-head nails. Numbers 20 and 30 have red rubber heads.

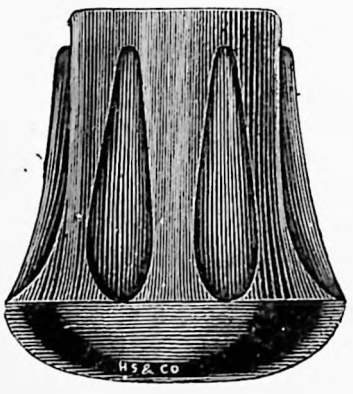
Black Rubber

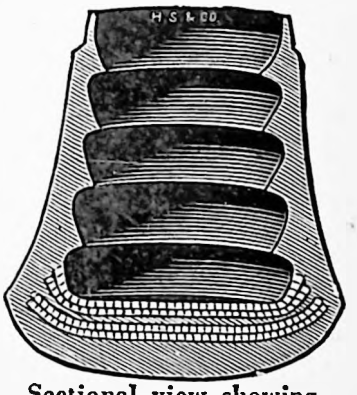
Nos.	1	2	3	0	00
Per 10 Gross	$5.50	$5.00	$4.00	....	....
Per Gross	.60	.55	.45	$1.05	$1.20
Per Dozen	.07	.06	.05	.11	.12

Nos.	20	30
Per 10 Gross	$6.00	$5.00
Per Gross	.65	.55

Rubber Sockets

Full Size Cuts



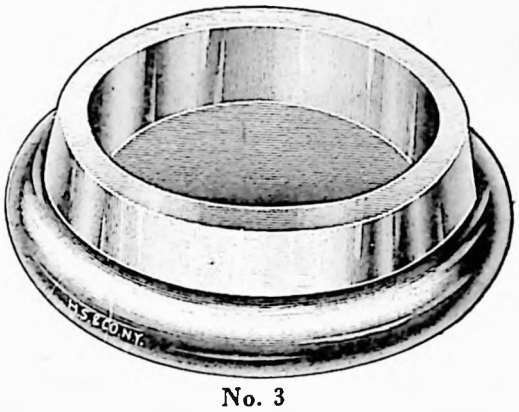


Sectional view showing internal construction

Inside corrugated end with canvas bottoms; outside ribbed.

Nos.	17	18	19	20	21
Inside diameter, inches	5/8	3/4	7/8	1	1 1/8
Per Dozen	$0.51	$0.60	$0.65	$0.76	$0.86
Each	.05	.06	.07	.08	.09

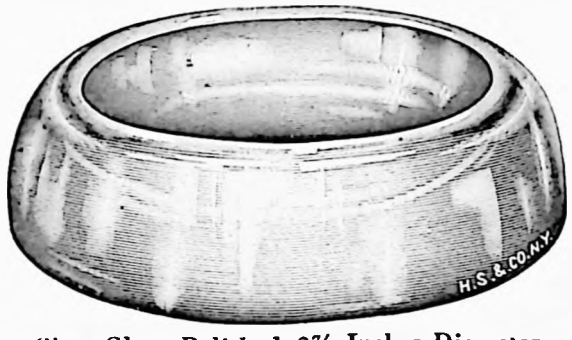
Glass Insulator Cups



No. 3

Clear Glass, Polished, 1¾ Inches Diameter

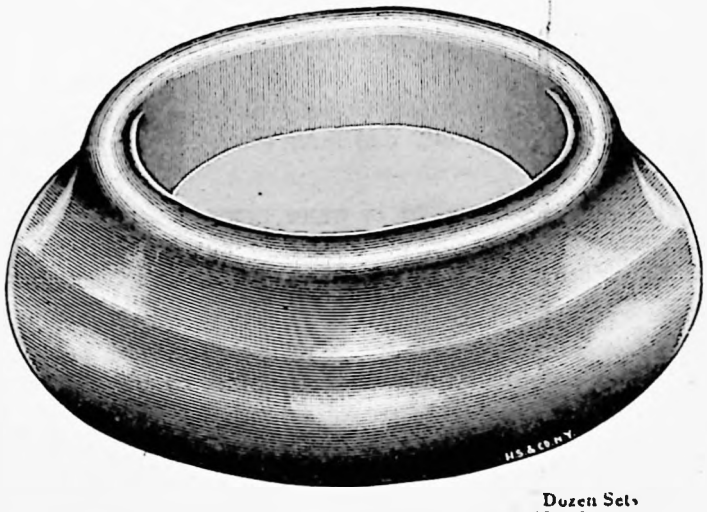
No. 3 Per dozen sets of four.....$1.62
No. 3 Per single set of four..... .15



Clear Glass, Polished, 2⅞ Inches Diameter

No. 350 Per dozen sets of four.....$2.00
Set of four..... .20

Porcelain



Nos.	Diameter	Dozen Sets	Less
113	2½	$0.36 per set	$0.40 per set
110	3	.36 per set	.40 per set
460	3½	.58 per set	.65 per set

Above prices are subject to change without notice

Polishing Wax

Genuine "Butcher"

Genuine "Butcher" is excellent for polishing floors, interior woodwork and furniture and will give equally good results when used on surfaces that have been treated with shellac or varnish.

In one-pound cans, per can $0.60
In ten-pound lots, per can ..... .55

Cotton Waste

A clean, selected white waste, free from grit; has unusually good absorbing qualities; used for cleaning, polishing and wiping around machinery. Put up in 50 and 100 lb. bales. Also 10-lb. bags.

		Per Bale	10-Lb. Bags	Less 10 Lbs.
No. 1	Per pound	$0.13	$0.14½	$0.17
No. 2	Per pound	.11¼	....	....

Paint and Varnish Remover

Ad-el-ite

This wonderful material will take off any thickness of paint, varnish, shellac or enamel, clean to the bare wood almost instantly and leave the wood in perfect condition for re-finishing.

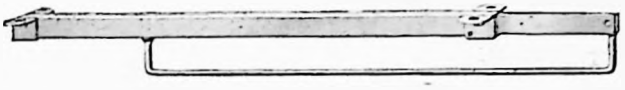
Ad-el-ite Remover is free of acids, alkalies or water, and will positively not bleach or raise the grain of the finest wood or veneer. It is the only remover manufactured from imported material, which is the principal reason why it possesses greater solvent properties than any other brand.

A practical test will demonstrate that it will take off more old finish per gallon and perform its mission cheaper and more satisfactorily than any other remover. Ad-el-ite Remover is also strongly recommended for cleaning old paint brushes, painted glass surfaces, and for softening old putty.

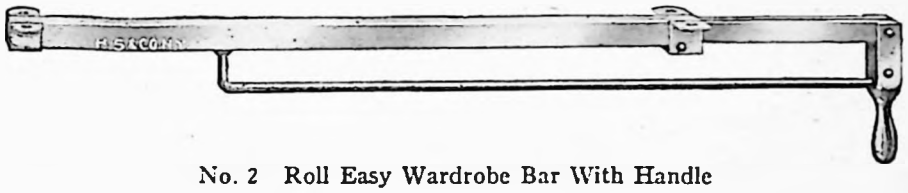
	Each
One-gallon cans	$2.00

Wardrobe Bars

Roll Easy



No. 1 Roll Easy Wardrobe Bar Without Handle



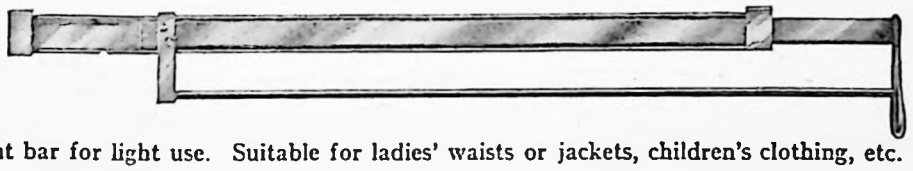
No. 2 Roll Easy Wardrobe Bar With Handle

No. 1 Without Handle				
Length, over all, inches	12	14	16	18
Per Dozen	$8.65	$9.50	$10.25	$11.35
Each	.80	.88	.95	1.05

No. 2 With Handle			
Length, over all, inches	14½	16½	18½
Per Dozen	$10.25	$11.35	$12.95
Each	.95	1.05	1.20

Yukon

Nickel-plated



A light bar for light use. Suitable for ladies' waists or jackets, children's clothing, etc.

	Each
Length, 24 inches	$2.65
Length, 30 inches	3.75

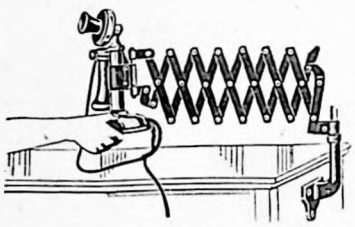
Economy

Nickel-plated

Roller Bearing Bar, Easy to Operate

	Each		Each
Length, 24 inches	$4.50	Length, 36 inches	$5.65
Length, 30 inches	5.25	Length, 40 inches	6.00

Telephone Brackets



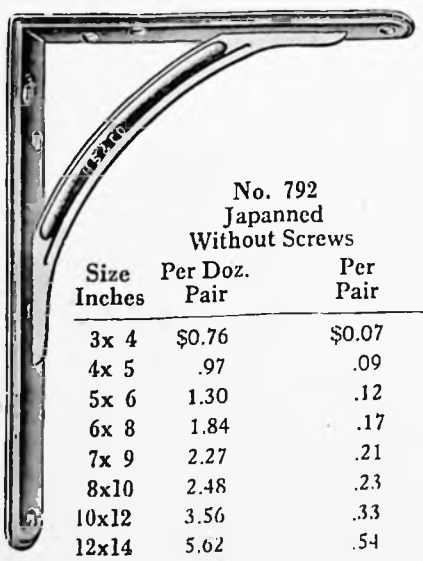
No. 87-92

No. H87-92

Nos. 87-92, Nos. 147-92 } In and Out Adjustment.

Nos. H87-92, Nos. H147-92 } In and Out and Up and Down Adjustment.

Nos.	Number of Links	Length Closed, Inches	Length Extended, Inches	Each
87-92	10	7	26	$4.05
147-92	10	7	38	5.40
H 87-92	12	9	28	5.85
H147-92	12	9	36	6.75



Shelf Brackets

Wrought Steel

Size Inches	No. 792 Japanned Without Screws Per Doz. Pair	No. 792 Japanned Without Screws Per Pair	No. 492A Bronze Plated With Screws Per Doz. Pair	No. 492A Bronze Plated With Screws Per Pair	No. 492N Nickel Plated With Screws Per Doz. Pair	No. 492N Nickel Plated With Screws Per Pair
3x 4	$0.76	$0.07	$3.02	$0.28		
4x 5	.97	.09	3.35	.31		
5x 6	1.30	.12	3.89	.36	$4.55	$0.45
6x 8	1.84	.17	5.29	.49	5.65	.58
7x 9	2.27	.21	5.72	.53	6.20	.62
8x10	2.48	.23	5.94	.55	6.45	.65
10x12	3.56	.33	7.67	.71	8.15	.82
12x14	5.62	.54	11.56	1.07		

Above prices are subject to change without notice

Storm Window Hangers

Schroeders

Visible

Visible

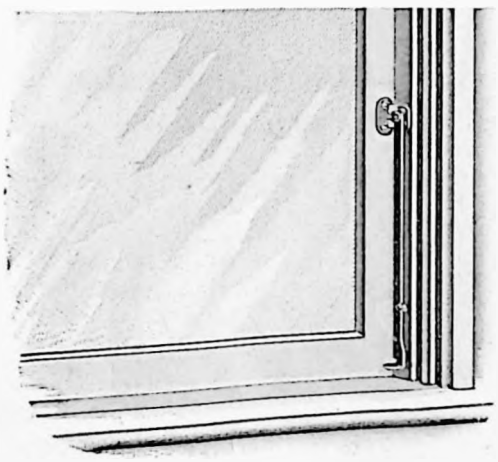
Wrought Steel. Packed with screws.
Four Pieces (two pairs) to a set.

	Per Dozen Sets	Per Set
No. 1716J Japanned Finish	$0.92	$0.09
No. 1716Z Sherardized Finish	1.20	.12

Storm Window Fasteners

Schroeders—For Side Attachment

Two to a Set. Packed with Screws

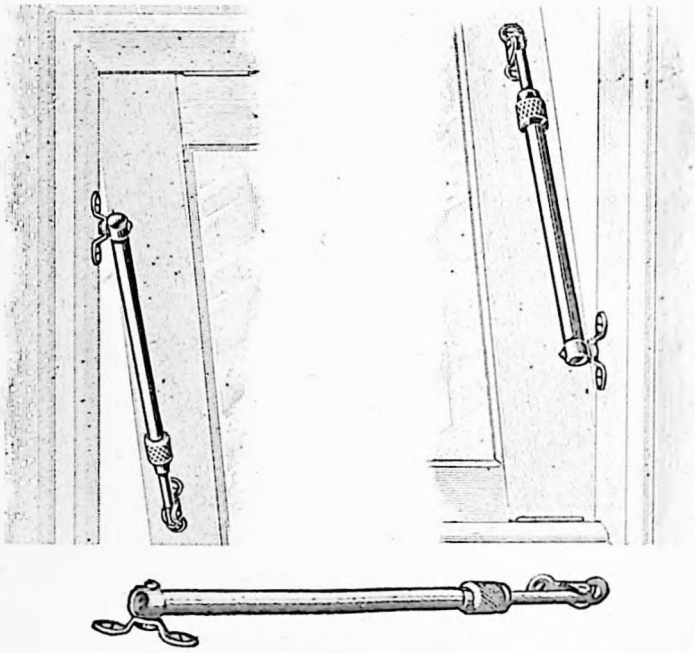


Showing Fastener Applied

	Per Dozen Sets	Per Pair
No. 1719J Wrought steel, Japanned	$1.24	$0.12
No. 1719Z Wrought steel, Sherardized	1.53	.15

Casement Adjuster

Automatic

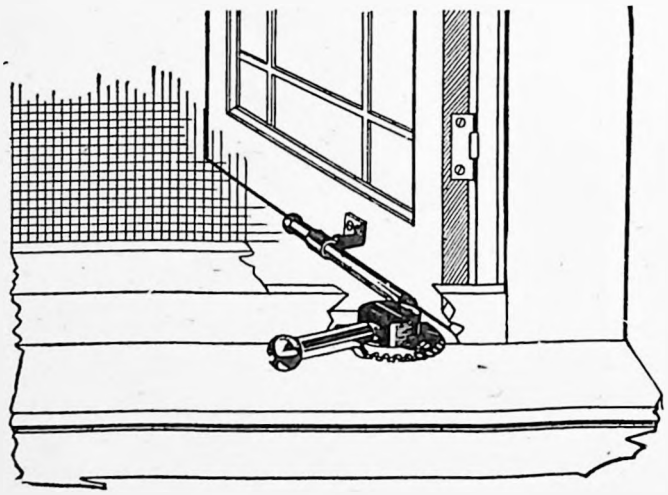


No. G45 Used on all kinds of sashes—swinging in or out, pivoted or hinged.

Per Dozen $10.80
Each 1.00

Casement Operator

Bull Dog



Reversible. For sash opening out. Operates the sash and locks it securely at any point without disturbing the screen. Requires very little alteration of the woodwork.

Further information on application.

Per Dozen $32.18
Each 2.98

Water Pails

Galvanized

Medium Weight

Quarts	10	12	14	16
Per Dozen	$2.70	$3.00	$3.25	$4.10
Each	.25	.28	.30	.38

Heavy Weight

Nos.	1312	1314
Quarts	12	14
Per Dozen	$4.00	$4.32
Each	.37	.40

Covers to Fit

Quarts	10	12	14
Per Dozen	$2.05	$2.38	$2.70
Each	.19	.22	.25

Stable Pails

J. I. C.

Flush Bottoms

Made of oak, with galvanized iron handle, hoops and straps.

Per Dozen $15.00
Each 1.40

Fire Pails

Galvanized

	Flat Bottom		Round Bottom
Nos.	112	114	312
Quarts	12	14	12
Per Dozen	$3.67	$4.10	$4.32
Each	.34	.38	.40

Red Covers to Fit

	Per Dozen	Each
12 quart	$2.70	$0.25
14 quart	3.02	.28

Oily Waste Cans

New York Pattern

Made of heavy galvanized iron throughout; reinforced legs.

Nos.	Dimensions, Inches	Height Over All, Feet	Each
1	11¼x11¼	2½	$2.05
2	11¾x15½	2½	2.70
3	12⅞x17½	2½	3.15
4	14 x19¼	2½	3.50
5	14⅞x21¼	2½	4.15
6	18½x23½	3	5.90
7	20½x28½	3	8.25

Ash Cans

Galvanized

Steel Ribbed

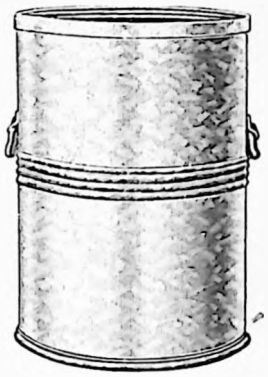
Without Covers

No.	018	18
Inches	17x26	17x26
Each	$3.00	$4.20
No.	19	20
Inches	18x26	20x26
Each	$5.50	$6.20

Note: No. 18 is a heavier gauge than 018.

Covers to fit:

No.	18	19	20
Each	$0.66	$0.81	$0.94



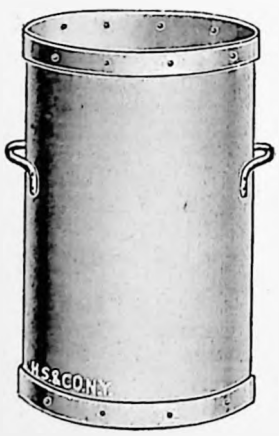
Without Covers

No.	2½	04
Inches	14x17¾	17x26
Each	$2.65	$2.75

Covers to fit:

No.	2½	04
Each	$0.40	$0.66

Engineers' Black Japanned



Made of heavy wrought iron, painted.

No. 2 18x24 inches. Each.....$4.55

Garbage Cans

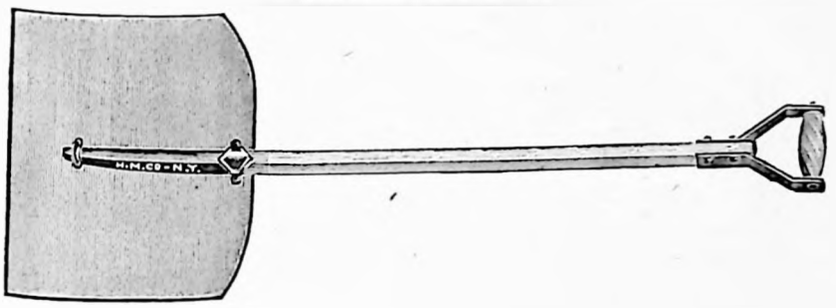
Flat Bottom

Deep seamless cover fits over outside. Made of heavy galvanized iron.

Nos.	Capacity, Gallons	Dimensions, Inches	Each
4/0	3	8¾x10	$0.74
02	6½	13x12½	1.40
04	9	14x15½	1.92

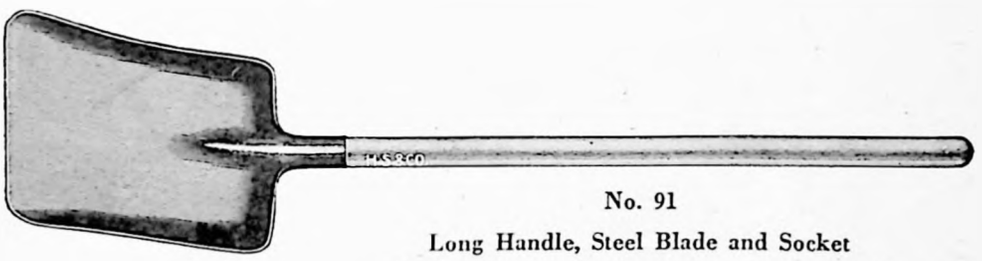
Above prices are subject to change without notice

Snow Shovels



Wood handle, steel blade firmly bolted to handle.

Per Dozen $13.70
Each 1.25

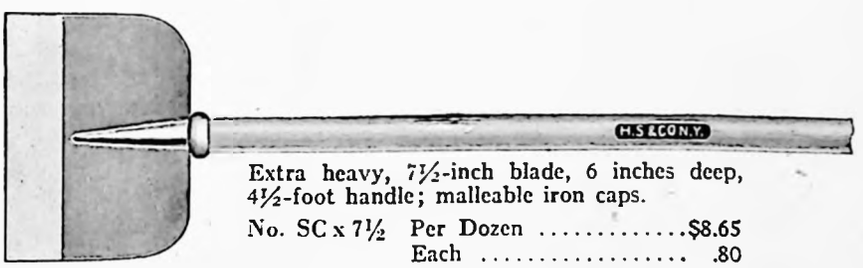


No. 91

Long Handle, Steel Blade and Socket

Per Dozen $4.85
Each ..... .45

Sidewalk Ice Choppers



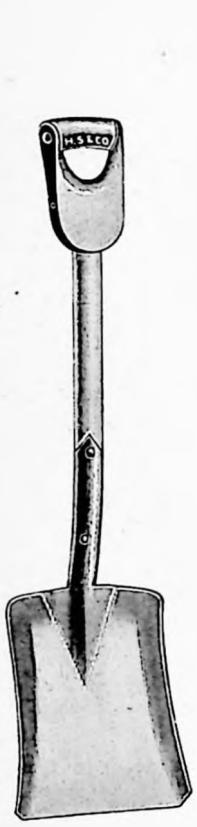
Extra heavy, 7½-inch blade, 6 inches deep, 4½-foot handle; malleable iron caps.

No. SC x 7½ Per Dozen $8.65
Each ..... .80

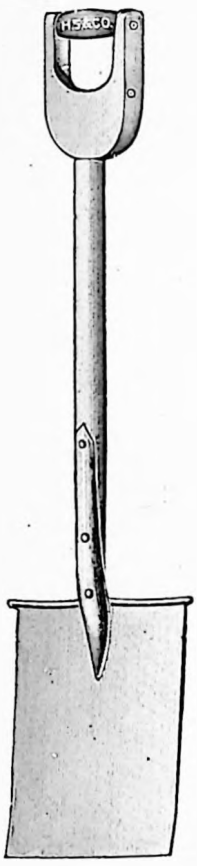
Extra heavy, steel laid blade, capable of removing any thickness of ice.

No. 79A Width of blade 5¾ inches. Each.....$1.90
No. 79Y Width of blade 4¼ inches. Each..... 1.55

Steel Shovels, Spades and Scoops



Shovel
D-Handle
Square Point



Spade
D-Handle

Furnace Scoop
D-Handle

Square Point Shovels—D Handle, Plain Back

H. S. & Co.

Nos.	2	3
Per Dozen	$11.85	$12.35
Each	1.10	1.15

Round Point Shovels—D Handle, Plain Back

Nos.	2	3
Per Dozen	$11.85	$12.35
Each	1.10	1.15

Spades—D Handle, Plain Back

No.	2
	Each
H. S. & Co.	$1.05
Baxter Co.	1.30

Furnace Scoops—D Handle

	Per Dozen	Each
Rowland. Black	$12.00	$1.10

Above prices are subject to change without notice

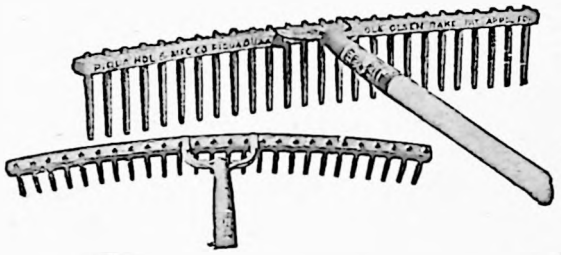
Garden Rakes

H. S. & Co.

12 Teeth. Each $1.05
14 Teeth. Each 1.15

Wooden Lawn Rakes

H. S. & Co.



Reversible

Tines	Each
26 Straight	$1.00
26 Curved	1.00

Garden Hoes

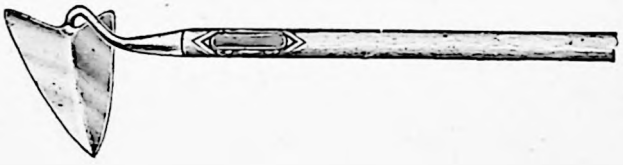
H. S. & Co.

Regular Cast Steel, Polished

Length of blade, 7½ inches.
Each $0.90

Warren Hoes

H. S. & Co.



Heart Shape

The best hoe for making drills, covering, hoeing and weeding.

7 Inches. Each $1.15

Scuffle Hoes

H. S. & Co.

	Each
No. XGOS, 9 inches.....	$1.05

Spading Forks

H. S. & Co.

D Handle. Four Tines

Best grade ash handle, spear pointed tines with diamond-shaped backs, handle strapped both sides.

Each $1.90

Garden Trowels

H. S. & Co.

Solid Steel

Blade and shank are one piece of forged steel. Hardwood handle.

	Each
8 Inch	$0.72

Slim Jim

Excellent for setting bulbs or transplanting.

	Each
7 Inch	$0.15

Garden Weeders

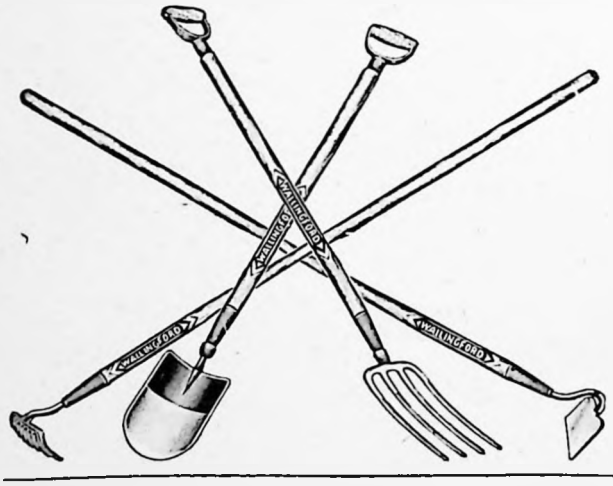
H. S. & Co.

A five finger pronged weeder which is excellent for loosening the soil in small flower beds, etc.

Each $0.12

Floral Sets

H. S. & Co.



3 Piece Set

Per Set

No. 3PF—Shovel, Rake, Hoe $1.75

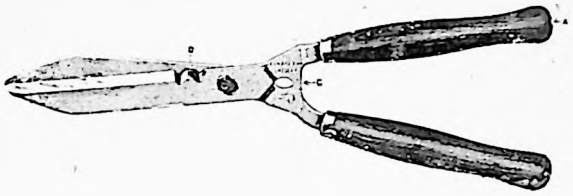
4 Piece Set

Per Set

No. 4PF—Shovel, Hoe, Rake, Spading Fork $2.60

Hedge Shears

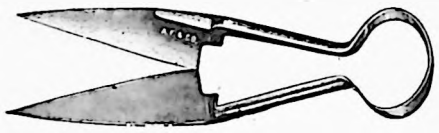
H. S. & Co.



Blades, Inches	Each
8	$2.50
9	2.85
10	3.25

Grass Shears

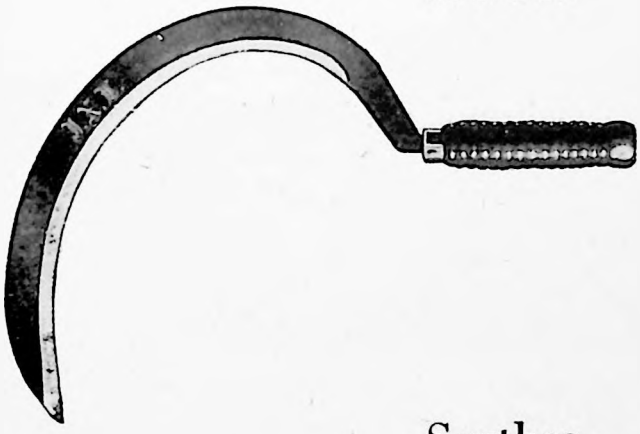
H. S. & Co.



Nos.	Blades, Inches	Each
357	5½	$0.75
360	6	.84
355	6½	1.35

Grass Hooks

H. S. & Co.



	Each
IXL Black finish, polished edges	$0.43
Our Best	.67

Scythes

H. S. & Co.

Imperial
Dutch Heel

	Each
34 inches	$1.75

White Ash Snaths for Above

Each $1.75

Pruning Shears

H. S. & Co.

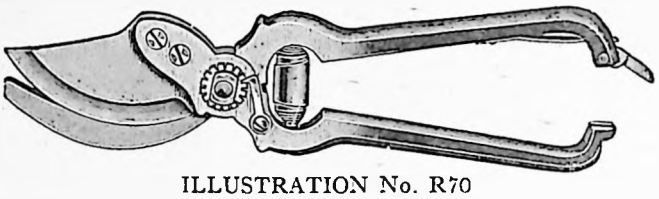


ILLUSTRATION No. R70

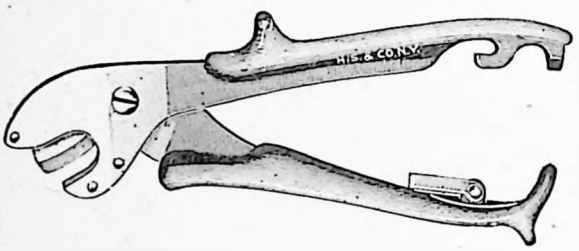
Has ratchet nut which may be tightened whenever wear is evident, and the pawl slipped a notch or two ahead, thus always holding blades in firm adjustment. Straw-colored tool-steeled blades of extra quality, correctly tempered. Volute spring. Removable blades.

9 inches overall. Each $1.53

No. 50 Same style as No. R70, but lighter in construction, has narrower blade and is without ratchet nut and removable blade features.

9 inches overall. Each $0.85

Levin



No. 23 7 inches overall; cuts ½ inch Dry Oak.
Each $0.80

No. 24 9 inches overall; cuts ¾ inch Dry Oak.
Each $1.00

Pruning Knives

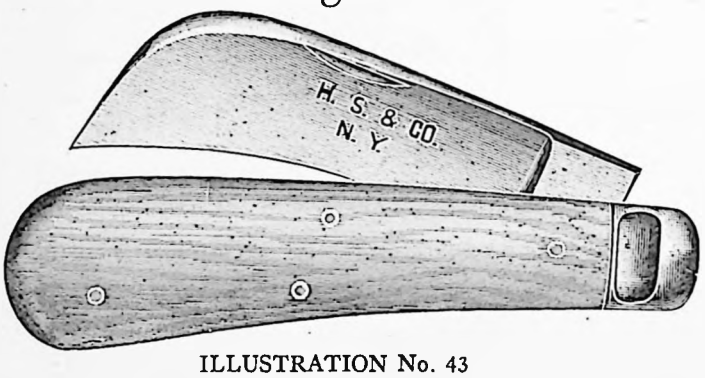


ILLUSTRATION No. 43

No. 11950 Genuine Wostenholm, IXL 7½ inches overall when open, 3-inch Blade, Horn Handle. Each $1.55

Asparagus Knives

H. S. & Co.

Fine quality steel. Each $0.38

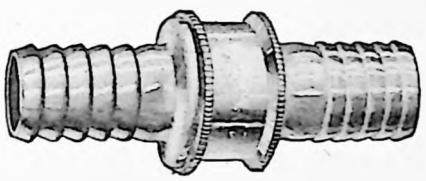
Nozzles

Gem

This nozzle is particularly adapted to general usage, the only action of the operator in changing from a solid stream to a fine mist or spray is the simple turning of the barrel. When the desired quality of stream or spray has been secured further attention is unnecessary, a feature of much value in the treatment of lawns or flower pots, when a fine spray is particularly advantageous.
This nozzle closes perfectly tight, making it unnecessary to turn off water supply at the valve when changing location of hose.
Brass finished, ¾ inch. Each.....$0.85

Brass Hose Couplings

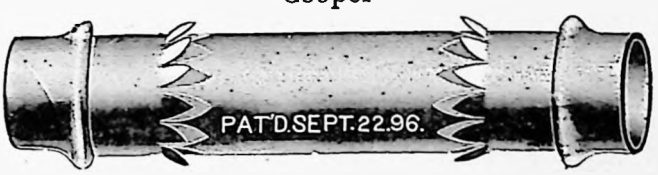
Sherman Finished



Being made from wrought brass, these couplings are free from sand holes and other defects. Double knurled flanges on nuts afford good grip for the hand. Full waterways, deep corrugations for imbedding into lining of hose. All seamless parts and fitted joints are other good features. ¾-inch size.
Per Dozen $1.75
Each ..... .17

Brass Hose Menders

Cooper



For ¾-inch hose.
Per Dozen $0.90
Each ..... .09

Hose Clamps

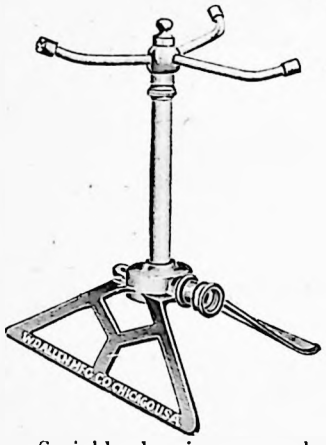
Sherman

Illustration shows the clamp partly screwed together.

	Per Dozen	Each
For ¾-inch garden hose.....	$0.48	$0.05

Lawn Sprinklers

H. S. & Co.



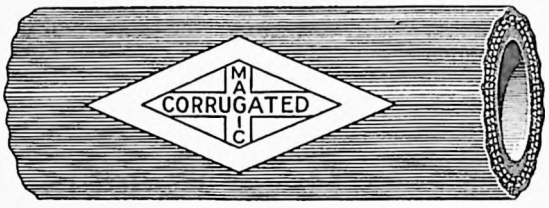
Guns & Balls
Fertall

	Each
Fertall Guns	$2.50
Fertall Balls	
Per Carton of 48	$1.00

The Cyclone Sprinkler has iron enameled stem and base with brass head and arms. Base 10 inches square; stands 12 inches high.
The Colorado Sprinkler is the same in general construction and finish but stands 20½ inches high with a heavier malleable iron base.

	Each
Cyclone	$2.00
Colorado	2.50

Garden Hose



Magic

An excellent garden hose, having corrugated surface, making it more durable. Couplings attached.

Lengths, feet	25	50
Per Length	$6.65	$12.95

Spider

An old reliable brand. A good hose at moderate price. With couplings attached.

Lengths, feet	25	50
Per Length	$4.25	$8.05

Double Diamond

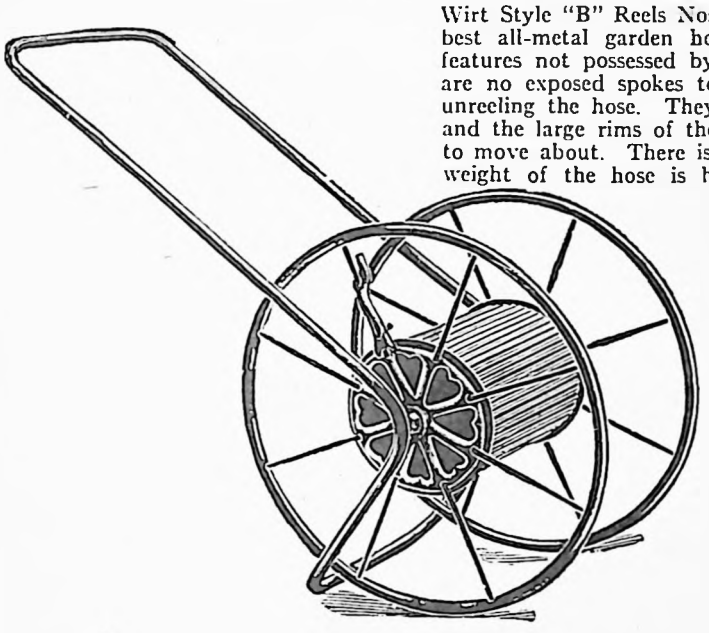
A high quality hose; made of wrapped duck insertion and high grade rubber. Couplings attached.

Lengths, feet	25	50
Per Length	$6.55	$12.75

Above prices are subject to change without notice

Hose Reels

All Metal, Strong Steel Tubular Frames

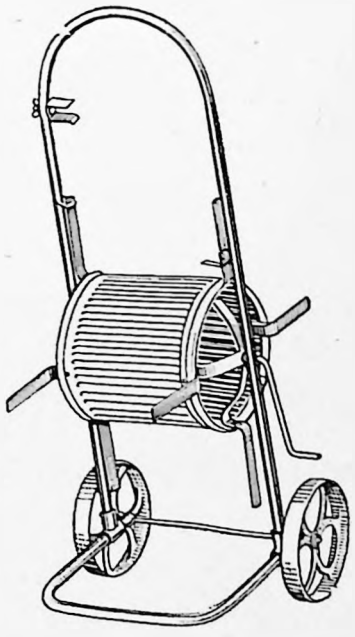


Wirt Style "B" Reels Nos. 10 and 20 are undoubtedly the best all-metal garden hose reels on the market, having features not possessed by any other type of reel. There are no exposed spokes to interfere with either reeling or unreeling the hose. They cannot tip over when unreeling and the large rims of the wheels make the reel very easy to move about. There is no extra weight to carry, as the weight of the hose is borne upon the rims and is not carried on the handle, as in other types of reels. Tubular steel rims and frame, steel spokes and malleable iron castings; corrugated galvanized drum. Neat in appearance and design. Frame and reel enameled green.

No. 10 Height of reel, 21 inches; weight, 18 pounds; capacity, 100 feet of ¾-inch rubber hose. Each.....$4.75

No. 20 Height of reel, 24 inches; weight, 20 pounds; capacity, 150 feet of ¾-inch rubber hose. Each.....$5.40

W. & K. No. 2

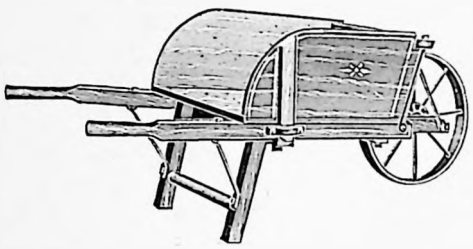


Constructed entirely of metal. Best tubular steel in frame, strong, cast iron wheels 7 inches in diameter, solid steel reel arms and heavy galvanized iron drum. The drum is corrugated to allow circulation of air and prevent mildew on hose; the galvanizing insures freedom from rust; the 9-inch drum prevents injury to hose from tight winding. The reel is equipped with a crank for convenience in winding up the hose; the adjustable hose holder at top of frame holds the nozzle in any position while spraying. Frame enameled green, wheel and reel arms black, which, with the galvanized drum, makes a very attractive appearance. An exceptionally strong, serviceable reel and will outlast the best wooden reel made. Weight, 15 pounds, bundled for shipment. Capacity, 100 feet ¾-inch rubber hose.

Each $3.25

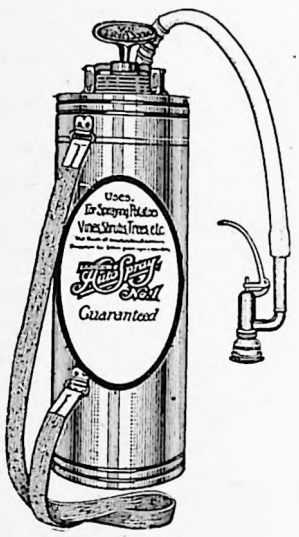
Garden Barrow

H. S. & Co.



Made of well seasoned lumber, legs and body securely braced, irons being bolted through, handsomely painted.

Each $6.15

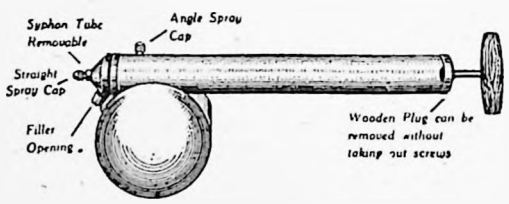


Auto Compressed Air Sprayer

This is without doubt the standard of all compressed-air sprayers; consists of a four-gallon reservoir made of heavy material, either brass or galvanized steel, as ordered. It is operated by working an air-pump, with which air is compressed on top of the solution. A few strokes of the plunger will compress enough air to operate the machine several minutes and three pumpings will discharge all the contents.

	Each
No. 1 Brass tank, with stop cock nozzle.....	$9.50

Continuous Sprayer

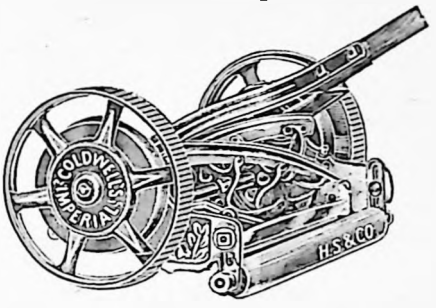

Syphon Tube Removable
Angle Spray Cap
Straight Spray Cap
Filler Opening
Wooden Plug can be removed without taking out screws

Will handle all solutions, insecticides and disinfectants. Used in the green-house, kitchen-garden, window-garden, for rose bushes, and in the poultry-house. Two spray caps—one straight, the other at an angle for reaching under leaves or spraying directly down. Construction of tank permits the sprayer to be operated at any angle, and it will not tip over when filling.

	Each
No. 25B	$1.25

Lawn Mowers

Coldwell Imperial



The bearings are split, adjustable hangers of phosphor bronze. The driving wheels are 10¼ inches in diameter. The revolving cutter gears are fine cut and keyed to the revolving cutter shaft, and do not revolve when the mower is being drawn backward, thus greatly saving the wear of the gears. Both wheels are provided with triple-pawl ratchets which, being made of malleable iron, are practically indestructible. The bottom knife bar is bolted fast to the side frames, thus insuring a four-sided rigid frame to build the mower upon and the knives are adjusted by means of split hangers, which raise or lower the revolving cutter, so constructed that all wear can be taken up in the bearings. These features together with the 6-inch diameters of revolving cutters make them particularly light running and fine cutting lawn mowers.
The mowers are finished in white, with red and gold trimmings. The workmanship and material are the best that can be obtained. They are equipped with terrace mowing arrangement, and are guaranteed to give entire satisfaction to the purchaser.

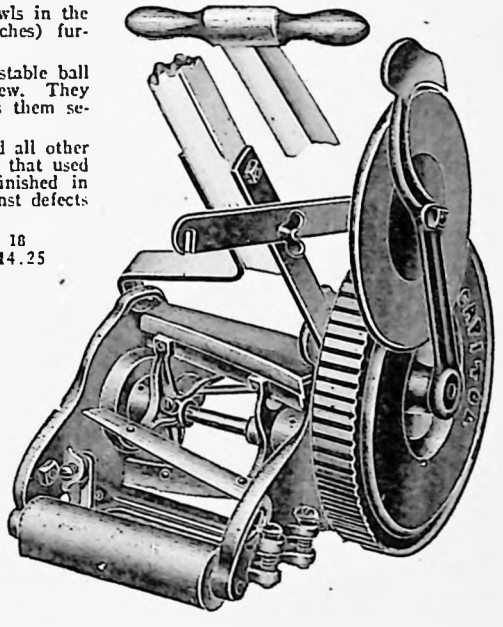
With 4 Blades

	Each
14-inch	$20.25
16-inch	21.60
18-inch	22.95

Add $1.00 to above for list on five-blade mower.

Coldwell Lakewood

Ball Bearing



It has high wheels (9 inches), flat steel sliding pawls in the ratchets, and large diameter revolving cutter (5 inches) furnished with four blades.

The Lakewood Lawn Mower is equipped with adjustable ball bearings, the adjustment being made with single screw. They are also provided with a locking screw which holds them securely in place.

The bottom knife is made of the best tool steel, and all other material entering into its construction is the same as that used in many high-grade mowers. These mowers are finished in aluminum, red and gilt trimmings. Guaranteed against defects in manufacture.

Size, inches	14	16	18
Each	$13.25	$13.50	$14.25

Lawn Trimmer and Edger

Capitol

Will trim and edge a lawn with remarkable speed and perfection; the shield over the blades protects the flowers. This machine has four crucible steel blades six inches in length, hardened and tempered in oil, with split bushings and double adjustment.

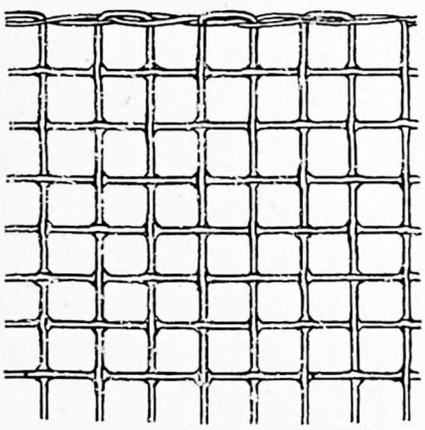
Each $11.25

Galvanized Steel Wire Cloth

Mesh

The size of any mesh in wire cloth is the distance from center to center of its parallel wires—not the clear space between these wires. The numeral which precedes this word in the description of cloth indicates the number of openings it has in one lineal inch. Thus, 4 mesh means that the cloth has 4 openings per lineal inch, each measuring ¼ inch from center to center of its parallel wires.

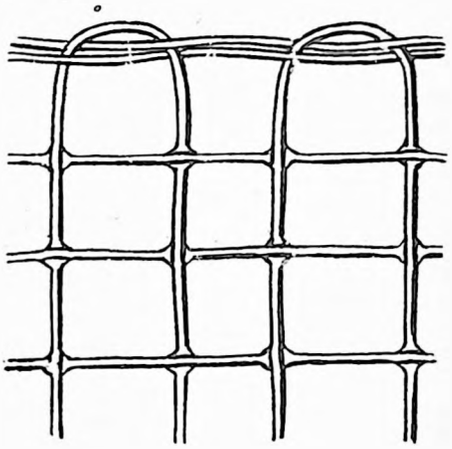
When ordering wire cloth be careful to state length and width, as well as mesh and size of wire wanted.



No. 4 Mesh—No. 23 Wire

In rolls of 100 linear feet. Carried in stock in widths of 24, 30, 36 and 48 inches.

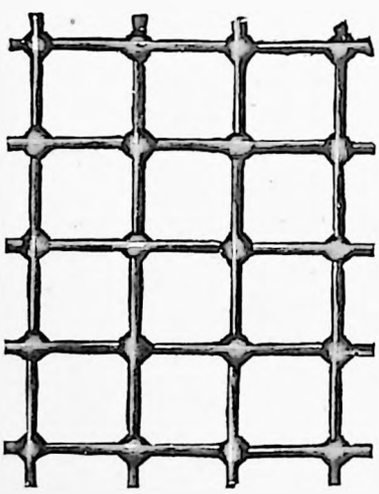
Per Square Foot.....$0.07



No. 2 Mesh—No. 19 Wire

In rolls of 100 linear feet. Carried in stock in widths of 24, 30, 36, 42 and 48 inches.

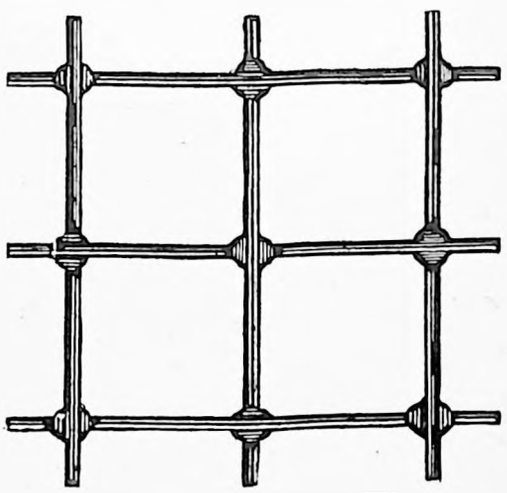
Per Square Foot.....$0.06



No. 2 Mesh—No. 14 Wire

In rolls of 100 linear feet. Carried in stock in widths of 30, 36 and 42 inches.

Per Square Foot.....$0.16



¾-inch Mesh—No. 15 Wire

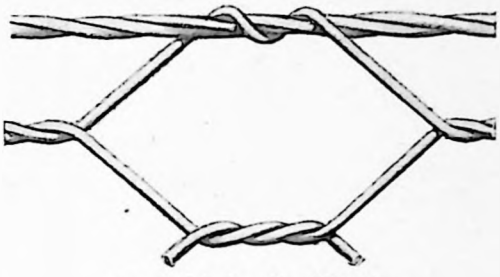
Per Square Foot.....$0.09

1-inch Mesh—No. 12 Wire

Per Square Foot.....$0.14

Poultry Netting

Galvanized



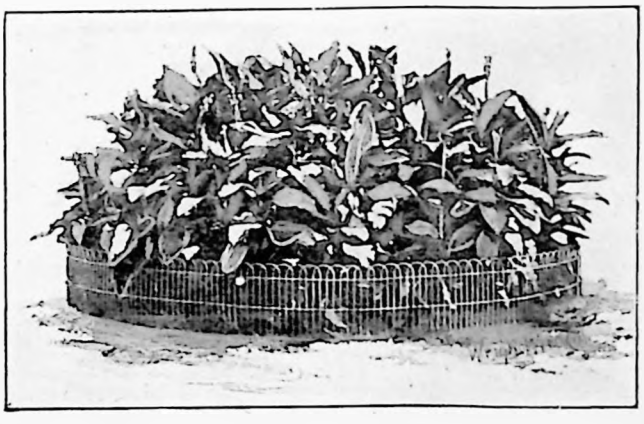
1-inch Mesh—No. 20 Wire

In Rolls of 150 Linear Feet

Width, Inches	Size of Mesh 1 Inch—20 Wire	Size of Mesh 2 Inch—19 Wire
24	$5.45	$2.75
30	6.50	3.25
36	7.45	3.70
48	9.90	4.95
60	12.40	6.20
72	14.85	7.45

Above prices are per roll.

Flower Bed Guards



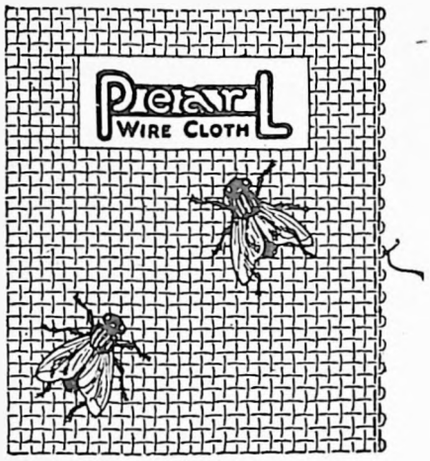
Excelsior—3-inch Mesh

Height, 16 Inches

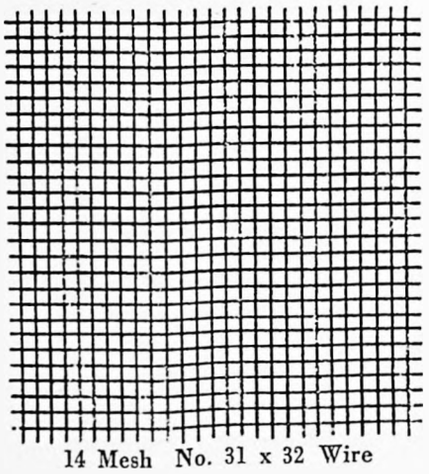
Lengths, feet	10	15	25	75
Per Length	$1.30	$1.95	$3.25	$9.75

Height, 22 Inches

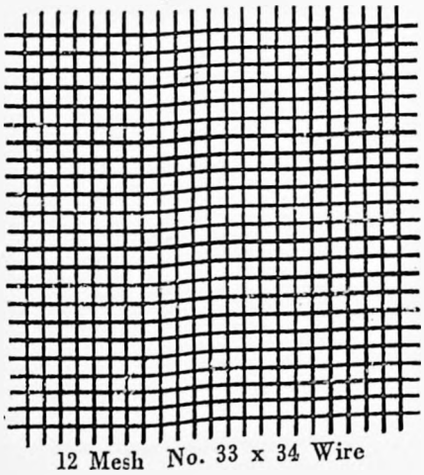
Lengths, feet	10	15	25	75
Per Length	$1.60	$2.40	$4.00	$12.00



14 Mesh No. 34 Wire



14 Mesh No. 31 x 32 Wire



12 Mesh No. 33 x 34 Wire

Wire Cloth

When ordering Wire Cloth be careful to state the exact length and width desired.

Mesh

The size of any mesh in wire cloth is the distance from center to center of its parallel wires—not the clear space between these wires. The numeral which precedes this word in the description of cloth indicates the number of openings it has in one lineal inch. Thus, 14 mesh means that the cloth has 14 openings per lineal inch.

Pearl

Is made of steel wire of unusual hardness protected by a metallic finish, which is the result of years of experiment. This imparts to the cloth remarkable durability and smoothness.
The metallic finish, at first lustrous—similar to silver—turns, after a short exposure, to a shade of gray, rendering the wire almost invisible.
The cost of screening a building with Pearl Wire Cloth is but little more than if the ordinary painted material is used and the expense and annoyance of frequently repainting and replacing the wire is avoided.
Can also be furnished *to order* in 16 or 18 mesh.

In Rolls of 100 Linear Feet

Carried in stock in widths of **18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46 and 48 inches.**
Per 100 square feet..... $5.35

Antique Bronze

This Bronze Wire is an alloy of non-corrodible metals of which copper represents about 90 per cent., and tests have proven it to be more durable than pure copper when used for window and door screens.
Requiring no paint, lacquer or other protective coating, light and air have an unobstructed passage through these fabrics. Exposure to the weather simply darkens the color, rendering the cloth nearly invisible.
We specially recommend Antique Bronze Wire Cloth in cases where exposed to salt air.
Can also be furnished *to order* in 16 or 18 mesh.

In Rolls of 100 Linear Feet

Carried in stock in widths of **18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46 and 48 inches.**
Per 100 square feet..... $7.75

Black Painted

The paint used on this cloth is a special mixture which practical testing has proven to be perfectly adapted to all requirements. It is composed of white lead, boiled linseed oil, turpentine, varnish and color pigments of best quality, and produces an elastic and durable coating which is essential to the life of painted screen cloth and which cannot be produced with inferior materials.
The painting is done by power machines of delicate adjustment, which thoroughly cover every wire with a coat of paint of the proper thickness.
As the cloth leaves the painting machine it passes into drying ovens which are maintained at the temperature required for slow and thorough drying of the paint.

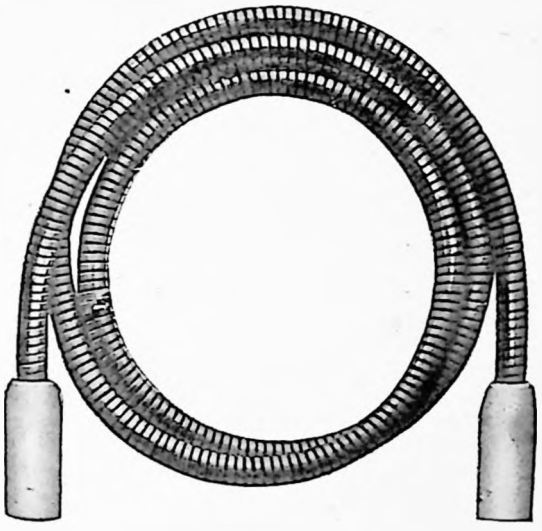
In Rolls of 100 Linear Feet

Carried in stock in widths of **18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46 and 48 inches.**
Per 100 square feet..... $2.40

Above prices are subject to change without notice

Metallic Gas Tubing

H. S. & Co.

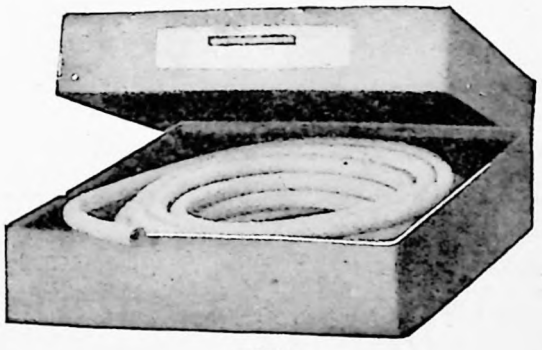


No. AG-100 Rubber Packed

In Lengths, feet	4	6	8	10	12	14
Complete with rubber ends. Each	$0.32	$0.47	$0.61	$0.75	$0.90	$1.04

Rubber Tubing

H. S. & Co.



White

Inside Diameter, Inches	3/16	1/4	5/16	1/2	5/8	3/4
Thickness of wall, inches	1/16	1/16	1/16	1/16	3/32	3/32
Weight, per 100 feet, pounds	4 5/8	5 1/2	6 1/2	11	20	21 1/4
Price, per 100-foot coil	$0.69	$0.56	$0.56	$0.56	$0.56	$0.56
Price, per foot, cut	.04	.04	.06	.07	.14	.14

Red

Inside Diameter, Inch	3/16
Thickness of wall, inch	1/16
Per foot, not cut	$0.05
Per foot, cut	.06

Fire Extinguishers

Fire Gun

A hand fire extinguisher which is positively double acting from the first stroke until it is absolutely empty; the mechanical construction is so perfected it never pumps air. The solution used is effective where water is useless, will not deteriorate, is a non-conductor of electricity, does not freeze at 50 degrees below zero and will not damage machinery or delicate fabrics. Immediately on striking the heat it forms a heavy blanket of non-combustible gas, which crowds out the air and puts out the fire. Especially effective on burning liquids, such as gasoline, kerosene, burning fats, etc. Approved by Underwriters Laboratories.

Finished in brass or enameled in standard colors. Packed complete, with bracket, *charged ready for use.*

Nos.	Capacity Quarts	Each
0	1	$10.00
1	1¼	12.00
2	1½	14.00

Fire Gun Fluid for Recharging

1 quart, U. S. Standard $1.50
1¼ quart, U. S. Standard 1.85
1½ quart (charge for No. 2) 2.25
1 gallon, U. S. Standard 6.00

Pyrene

Tested and approved by Underwriters Laboratories, Inc. Reduces auto insurance 15 per cent. each year. Has instant effect in extinguishing fires of oil, gasoline or acetylene gas. Liquid when heated to 200 degrees, it turns into a heavy gas, which settles over the flame, cutting off the air supply. Will damage nothing; will not stain or mar varnish or upholstering. Operates easily and refills quickly.

Shell made of brass or brass nickel plated; interior mechanism consists of 43 separate parts made of brass and white metal. Black enameled bracket.

Brass, with bracket. Each $10.00

Fluid

Extra charges, quart $1.50

Above prices are subject to change without notice

Fire Extinguisher

Guardene

The Guardene Fire Extinguisher is made of cold-rolled copper, burnished outside and heavily plated inside with non-corrosive metal. This extinguisher is capable of extinguishing a free-burning fire in its early stages.

Guardene Extinguishers are well designed and do not look out of place in any office, school or theatre. They afford ideal protection in all classes of buildings where there is no danger of freezing. Weight, filled, 40 pounds.

To use extinguisher simply turn upside down. It throws a strong stream 40 feet. Approved and labeled by the Underwriters' Laboratories.

Capacity Gallons	Each
2½	$14.40
Extra Charges	.55
Extra Japanned Hooks	.15

Pump Tank—For Fire

Accurate

Constructed of 24 U. S. Gauge galvanized iron, coated with asphaltum to resist corrosion, painted red on outside with attractive instruction plate. The Pump Tank is equipped with a double-acting pump which throws a strong stream 50 feet.

The Pump Tank can be used in heated or unheated buildings. Plain water is the extinguishing agent unless the likelihood of freezing exists; in such cases certain quantities of accurate FREEZE PROOF will depress the freezing point for use in various temperatures.

The Pump Tank being easy to carry about, simple to operate, quickly recharged, renders added protection for the factory, school, home and outside buildings. Approved and labeled by the Underwriters' Laboratories.

Diameter of tank, 9½ inches; height over all, 27¼ inches; length of hose, 24 inches; weight, empty, 13 pounds; filled, 52½ pounds.

Capacity, 5 gallons. Each..... $15.00